### Vendor Pump and Driver Quotes for C-44 Preliminary OPCC Summary Table

#### **Morrison Pump Company**

Electric Drivers	Quote	Email	Modeling	Fgt. to Job site	Estimate Total
Pumps – 275 cfs @37'	\$480,000	6/5/06 2:42 PM	Included	Included	\$480,000/EA
FSI In Carbon Steel	\$100,000	6/27/06	Included	Included	\$100,000/EA
Spare Parts	\$50,000	6/27/06	NA	Included	\$50,000/EA
Start Up Service and Training	\$1000/Day	6/27/06	NA	NA	\$1500/Day

Component	Shop Drawing Preparation	Review	Modeling	Manufacturing	Shipping	Total Lead Time
Pumps – 275 cfs @37'	8-9 wks	4-6 wks	Concurrent with Manufacture	50 wks	2 wks	64-67 wks
FSI	8-9 wks	4-6 wks	12-14 wks	26-28 wks	2 wks	46-59 wks

#### **Ideal Electric**

Electric Drivers	Vendor Quote	Email/Fax	Modeling	Fgt. to Job site	Estimate Total
Driver – 1700HP @ 300 RPM	\$445,900/EA	Fax 5/19/06, email 6/27/06	NR	\$4000-5000	\$450,900/EA
Heat Exchange Units for water cooling	\$25,000- \$60,000/EA	Email 6/27/06	NR	Included	\$60,000/EA
Start Up Service and Training	\$3000/Day	Email 6/27/06	NR	NR	\$3000/Day

Note: Lead times assume a single review Updated 06/27/06

	Delli de	Delivery	IIme - weeks	90	12									16												T	
	Ectimoted	Parillated	- 1	4	\$80,000					\$50,000				\$933,000													
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-ist	Capacity		75 ofs @ 36 ft	25 ton	1011 0400	cim@100 psi			Pisd ci (f) lilio no+	U KW	10 gpm	34 000 of 34"	,000 citi (@		# 00 @ man	100 gpill (@ 20 lt		And a									
quipment L	P&ID	Number	27		7 6	07		7	2 4	70	2 5	2 6			4	2				-					 		
C-44 Pumping Station - Equipment List	Manufacturer/Model		Flowserve/Morrison/Fairbanks Morse	ल्	Atlas Copco		***************************************	Gardner Denver-Nash	Catabiliar		Ozone Pure Water	Continental	Duperon	the state of the s	- Andrews - Andr	the state of the s	Butterfly valves with kenetrol pneumatic actuators	Butterfly valves with kenetrol openmatic actuators	I acres with the property acres of the second of the secon				***************************************	***************************************			
-	Equipment Name		Process Pumps	Crane	Air Compressers	Hydropneumatic Tank	Refrigerant air dryer	Vacuum Pumps	Engine generator	Well Pump	Ozonator	Exhaust Fans	Bar Screens	Air conditioner	Sump pumps	Hot water heater	Vent valves	Vacuum Valves									
Equipment No Number D	Mulliber Revision	ON CITIES NO.	4		2	1	1	2/1	1	+	1	4	8	1	2	1	4	4									
Equipment No.	Transminding to																										

Need to confirm.

NO. 158 P. 2



IDEAL ELECTRIC CO. 330 Bast First Street Mansfield, OH 44902 Telephone (419) 522-3611 Fax (419) 522-9386

# ELECTRIC MACHINERY CO.

800 Central Avenua Minneapolia, MN 55413 Telephone (612) 378-8000 Fax (612) 378-8054



Quotation No.

Date:

May 18,2006

Page 1

District Office - XZ

Project Name:

(F) 813 (282-2440) 39 C102 512 (20) - 570 H PE

Your Inquiry:

RFBQ/Mallory Co/ Jim Mallory

We are pleased to quote you on the following equipment and materials subject to conditions specified below:

This is a budget quote for a Brushless Synchronous Vertical Motor Quoted with out specifications.

This budget quote does not include: spare parts, start up service, adder items, training or freight charges.

Delivery is 35 to 39 weeks after release to manufacturing.

Item #1

Quantity 4,

1700HP, SMVB . 4000v, 3ph ,60 cy, 300 RPM, ODPG

Price net ea USD \$445,900

Total Quantity 4: net USD \$1,783,600

Standard 12/18 Warranty as per attached

If you require anything additional, please advise. We thank you for this opportunity to provide a Budget Quote.

Regards.

Joe Rozick
Northeast Regional Sales Manager
Ideal Electric, Electric Machinery
9946 Aspen Ct
Concord Twp., Ohio 44060
Office 440-354-3325

Jerry Nelson

IDEAL ELEC SALES

10. 38 1. je 5086

#### ICOMMENIUTERMS AND CONDITIONS

The conditions stated below shall take procedures over any conditions which may appear on your standard form and no provisions or conditions of such term, sadapt at expressly stated herein, shall be binding on ideal Electric Company.

TERMS. Nei 30 days unless orhorwise noted.

GENERAL' ideal shall not, in any event, be liable for prospective or speculative profits or indirect, special consequential or liquidated damages or penalties. Any assignment of this order, or any rights herounder, by the Purchaser, without the westen consent of ideal, shall be void. No waiver, alteration, or madification of any of the provisions hereof shall be binding unless in writing and signed by a duly authorized representative of Ideal. The provisions hereof constitute the entire contract with respect to the apparatus sold harmonder and any previous communication, verbal or written, contrary to eny of the

TAXES: Prices do got include state or local mace based on or measured by sales, which tax or taxes will be added to the prices where applicable.

PAYMENTS: If, in the judgment of Idea, Electric Company, the figureial condition of the Purchaser, at any time during the manufacturing period, or as the time apparatus is ready for shipment, does not justify the terms of payment specified, Idea, Electric Company may require full or partial payment in advance. Pro rate payments shall become due as shipments are delayed by the Purchaser. Payments shall become due from date when Ideal Electric Company is prepared to make shipment. If manufacture is delayed by the Purchaser, payment shall be made based on the contract price and percent at completion. Apparatus held for the Putchaser shall be at the rick and expense of the purchaser.

DELIVERY Unless other was stated, delivery will be made f.s b, point of shipment. Shipping dates are approximate and are based on prompt receipt of all necessory information from the Parcheser.

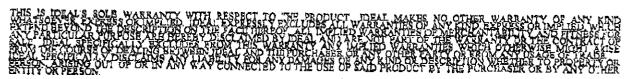
DELLAY. This ideal Electric Company shall not be liable for delay is delivery or failure to manufacture due to causes beyond its reasonable control such as sons of God, acts of the Purchaser, acts of civil or military authority, priorities, fires, transportation, strikes, floods, epidemics, quarantide restrictions, war, not celays in transportation, car atortages and inability due to causes beyond its reasonable control to obtain necessary labor, materials, or manufacturing facultines. In the event of any such delay, the date of delivery shall be extended for a period equal to the time less by the reason of the delay.

CANCELLATION: Any other or contract may be canceled by the Purchaser only upon payment of reasonable charges based on expenses already incurred and commissiones made by Ideal Elecule Company.

TITLE. The fifth to the apparatus cold, as been a specified, shall not pass from Ideal and shall remain personal property until fully paid for in each and the Furtherer agrees to perform all acts, which may be necessary to perfect and easure resention of title to the said apparatus in Ideal Electric Company. The Purchaser shall assume all risk of loss after the apparatus is delivered.

WARNANTY: Ideal Birctric Company ("Ideal"), in connection with the product sold hereunder (" the Product"), hereby warrants that the Product will be free from defects in worksmanship or materials which develop under proper or normal use for a period of 12 months from nonfication of ready to ship, fig. b ideal's factory, Manafield, Ohio. In the event that the Product develops a defect in workmanthip or materials in the paried of warranty, ideal agrees to repair or replace the defective part or parts during cormal bushases hours if its inspection of the Product reveals such defect, provided written fieties of any such defect is given to little prior to the expiration of the warranty period. Repair or replacement of the defective part of parts shall be the Purchaser's sole cornedy in the event of a breach of this warranty. Under no circumstances will ideal be liable either directly or indirectly (e.g., by way of a claim of indemnity of contribution against ideal by the Purchaser in the event of a claim against the Purchaser by another party) for special consequence or mendeard demages mentred by the Purchaser or anyone claiming through or on behelf of the Purchaser of any other party, including any domages returned from loss of use, loss of profits or loss of business arising out of or in connection with Ideal's breach of this warranty or Ideal's breach of the contract of sale of the Product of the use or performance of the Product, which in contact of tort, including nugligence, even if Ideal has been advised of the possibility of such damages. In up event shall ideal's liability for breach of this warranty exceed the cost of repair or replacement of defective parts. The warranty, and any hability of idea! under the warranty or the contract of sale, shall terminate upon expiration of the 12 month period described above.

No warranty shall extend to any Product which has been impropuly stored (other than by Ideal), or improperly installed (other than by Ideal), or which has been improperly operated or maintained (other than by Ideal), or to which Ideal's recommended maintained program has not been applied, or which has been damaged, abused, modified or used in any unauthorized application, or if adjustment, repair, or replacement results from causstrophe. facil of negligence of Parulasser or any supplier or commont thereof (other than Ideal), employee, licensee, agent, successor, or assigned thereof or anyone elecclaiming through or on behalf of the Purchaser.



PATENTS. Ideal Electric Company shall defend any suits or proceedings brought against the Purchaser, so far as based on a claim that any apparatus so d he evaded, or any part thorseof, constitutes an infringament of any passes of the U.S. other than a claim covering a process of a public livereof, it notified promptly in writing and given authority, information and againtance (at ideal Electric Company expense) for the dufense of same, and ideal shall pay all damages and costs awarded thereis against the Purchager, provided that this agreement shall not excend to any inflingement braced upon the manufacture, use or sale of any of said apparatus or any part thereof in combination with apparatus or things not furnished netected. In case the apparatus, or any part thereof hereunder, is in such this held to constitute infringement and its use is anjoined, Ideal shall, at its own expense, either procure for the Purchases the right to continue using said apparatus or modify it to it becomes non-infringing or remove said apparatus and refune the purchase price, and the transportation and installation costs thereof. The foregoing states the entire liability of idea! with respect to patent infringement by said apparatus or any part thereof.

(IMr Picklist Tenne Conditions)

From:

James Mallory [jmallory@mindspring.com]

Sent:

Tuesday, June 27, 2006 9:41 AM

To:

Glassen, Richard

Subject: Ideal 1700 HP sync Motors

Richard,

Here is further info on the subject.

Depending on the quality of the cooling water available, the cost of the coolers would be as follows: (We would need a sample of the water to make an accurate proposal.)

Normal water \$25 to \$30K per motor.

High solids \$50 to \$60K per motor.

#### Spare Parts:

Bearing are the only major spare parts to be considered. Two (2) complete sets of bearings would be approximately \$ 15 to 20K.

#### Training:

3 to 4 days would enable the user to be proficient in the operation of these motors. Estimate \$1500.00 per day plus approximately \$1500.00 for travel expense per trip ( air fare, hotel, car etc.). Hopefully only one travel day would be required.

#### Start up:

8 to 10 days @ \$1500 per day + \$1500 for travel per trip. If all four motors are available for startup at the same time only one trip should be required. Some of the training may be completed while start up is in progress or immediately following start up.

Freight: Approximately. \$4000 to \$5000.00 per motor. Will be less if two motors can be fitted on one truck.

Ideal has 20 similar water cooled motors in service in southern Nevada. (Similar climate conditions as South Florida). We can provide reference list if you wish.

I will advise the BTU throw off of these motors as soon as our engineers are finished with their calculations.

Thank you for your continuing interest in Ideal Electric Motors.

Best regards,

Jim Mallory The Mallory Company 813/907-5800 T 813/907-5898 F 813/690-4604 C

From:

Mike Murazzi [mmurazzi@morrisonpump.com]

Sent:

Monday, June 05, 2006 2:42 PM

To:

Benjes, Bud

Cc:

Glassen, Richard

Subject: RE: C-44

Bud,

Budget pricing for the C-44 Pumps and Electric Motors are as follows:

**\$480k each** - Four (4) Morrison Mixed Flow Pumps, Model VPM-68-60, providing 275 CFS @ 37 Ft. TDH. Per all SFWMD Specifications, No Suction Bell; Includes Sump/FSI Model Testing. **\$500k each** - Four (4) Vertical Direct Drive Electric Motors (6600V/3PH/60Hz), 1500 HP @ 295 RPM.

Best regards,

Michael Murazzi
Morrison Pump Company
http://www.morrisonpump.com
(954) 922-5880 office
(954) 258-3669 mobile
(954) 922-7729 fax

----Original Message----

From: Benjes, Bud [mailto:Bud.Benjes@hdrinc.com]

Sent: Thursday, June 01, 2006 2:55 PM

**To:** Mike Murazzi **Cc:** Glassen, Richard **Subject:** C-44

Mike

My estimator tells me we need a vendor quote (estimate) for the four pumps by June 10th. Would you

provide me with that so we can make our next submittal to the District? Thanks

Bud

From:

Mike Murazzi [mmurazzi@morrisonpump.com]

Sent:

Wednesday, June 14, 2006 2:56 PM

To:

Glassen, Richard

Subject: RE: Morrison Pump Quote

Richard,

#### Quick replies:

- 1. Yes, price includes freight to sight.
- 2. I'll get a good estimate by next week for a steel FSI.
- 3. Assume 60 days for technical submittals (pumps & motors).
- 4. We estimate 1 year from go to manufacture pumps (submittal approval) to delivery to sight. Testing however, would be handled concurrently and be completed prior to pump completion. Specifically we would run a scaled Pump Performance Test of the pump (12") and model FSI in our laboratory, this confirms our pump/FSI performance. Morrison would contract out the hydraulic sump modeling (At Clemson U. or other reputable hydraulic laboratory), which would highlight any potential vortices or other adverse conditions in the station intake. That would not impede the manufacture or testing the pump itself.
- 5. The motor would be released for manufacture prior to pump testing. I would presume that it would meet the same schedule. Morrison would need to coordinate Speed/Torque requirements, etc. to proceed with motor manufacture.

Best regards,

Michael Murazzi
Morrison Pump Company
http://www.morrisonpump.com
(954) 922-5880 office
(954) 258-3669 mobile
(954) 922-7729 fax

----Original Message----

From: Glassen, Richard [mailto:Richard.Glassen@hdrinc.com]

**Sent:** Wednesday, June 14, 2006 10:06 AM

To: Mike Murazzi

Subject: RE: Morrison Pump Quote

Mike, does your price include Fgt to the jobsite?

Richard L Glassen, P.E. HDR ONE COMPANY | Many Solutions 128 S. Tryon St.

Suite 1400

Charlotte, NC 28202-5001

From:

Mike Murazzi [mmurazzi@morrisonpump.com]

Sent:

Tuesday, June 27, 2006 10:13 AM

To:

Glassen, Richard

Subject: RE: Budget Pricing and Verification

#### Richard,

Assume \$100k for the FSI delivered. Pumps and motors include freight to sight, \$25k motor spares, \$50k pump spares. \$1,000 per day start-up/training. Do you have initial pump & motor specs that we can review?

I am up the mountains this week with spotty cell phone service.

#### Mike

----Original Message----

From: Glassen, Richard [mailto:Richard.Glassen@hdrinc.com]

Sent: Sunday, June 25, 2006 5:05 PM

To: Mike Murazzi

Subject: Budget Pricing and Verification

Importance: High

Mike, I still need the following information from you on the budget pricing for C44:

- FSI in carbon steel
- 2. Fgt. for FSI material
- 3. Fgt. For pumps
- 4. Fgt. For motors
- 5. Cost per day for start up and training
- 6. Spare Parts for Pump
- 7. Spare Parts for Motor

Richard L Glassen, P.E.

#### **HDR**

**ONE COMPANY** | Many Solutions

128 S. Tryon St.

**Suite 1400** 

Charlotte, NC 28202-5001

Mobile 704-232-2194

Office 704-338-6772

Fax 704-338-6760

Fax 704-973-6879

richard.glassen@hdrinc.com

Check out our new interactive SDWA wall chart at <a href="http://www.hdrinc.com/15/43/3/default.aspx">http://www.hdrinc.com/15/43/3/default.aspx</a>



#### **Budgetary Proposal No. 3610**

Date: Friday, May 19, 2006

To: HDR Engineering, Inc.

Mr. Bud Benjes

Phone: 512-912-5100

Fax: 512-912-5158

Email: Bud.Benjes@hdrinc.com

Re: South Florida Water Management District C-44 Pump Station

From: Duperon Corporation

Ms. Lorene Bruns

Phone: 989-754-8800 Fax: 989-754-2175

Email: Lbruns@duperon.com

Pages: 4

Subject: Budgetary Proposal No. 3610 - South Florida Water Management District C-44 Pump Station

We appreciate the opportunity to provide the following pricing for the screening requirements at the South Florida Water Management District, C-44 Pump Station Project.

#### **SCOPE OF SUPPLY:**

#### Option I: (8) A36, HDG Steel Heavy Duty Model FlexRake® Units

(8) Q.FRHD.4E.H FlexRake® Heavy Duty Model

Nominal Rake Specifications

Width:

8 ft

Length:

42 ft

Unit Angle (from vertical):

30 degrees

Nominal Scraper Specifications

Spacing:

6 Link (63 in)

Configuration:

Serrated

Drive Specification:

1/4 HP or 1/8 HP (dependent on power availability), with

weather shield

Bar Screen Material/Coating:

A36 Steel, HDG

Bar Sizing:

 $0.38 \text{ in } \times 4.00 \text{ in}$ 

Bar Clear Opening:

3.00 in

Estimated Container Height:

4 ft storage on the deck

Accessories:

Anchoring base plates, chain slides, deadplate

Shipping Data:

Fully Assembled

(8) Steel Premiums

Based Upon Current Steel Prices Subject To Change At Time of Order

#### **INCLUDES:**

- (4) SP1-001 Standard Spare Parts Packages
- (4) SP1-001 Standard Spare Parts Packages
- (6) Operation & Maintenance Manuals
- (1) Day On-Site Technical Assistance\*

\*Includes Estimated Expenses, based upon 2 week notice. Additional expenses incurred due to shortened lead time, changes in itineraries, or other changes may incur additional charges.

(1) Year Duperon Standard Warranty

#### **OPTIONAL ITEMS:**

(8) Controls - DC Standard Nema 4X Packages\*

\*Purchasing controls from Duperon is optional, however if a Duperon package is not selected, then it is strongly recommended that Duperon review/approve controls plan to insure they meet equipment specifications and maintain integrity of warranty.

- (1) Additional Days On-Site Technical Assistance
- (4) Freight (estimated 4 dedicated trucks)

#### **SCOPE OF SUPPLY:**

#### Option II: (8) Heavy Duty Rake Only Model FlexRake® Units

(8) Q.FROHD.4E.H FlexRake® Heavy Duty Rake Only Model

Nominal Rake Specifications

Width:

8ft

Length:

42 ft

Unit Angle (from vertical):

30 degrees

Nominal Scraper Specifications

Spacing:

6 Link (63 in)

Configuration:

Serrated

Drive Specification:

1/4 HP or 1/8 HP (dependent on power availability), with

weather shield

Bar Screen Material/Coating:

Utilizing Customer's Existing Barscreen

Bar Sizing:

0.38 in x 4.00 in (Utilizing Customer's Existing Barscreen)

Bar Clear Opening:

3.00 in

Estimated Container Height:

4 ft storage on the deck

Accessories:

Anchoring base plates, chain slides, deadplate

Shipping Data:

Partially Assembled

#### **INCLUDES:**

- (4) SP1-001 Standard Spare Parts Packages
- (4) SP1-001 Standard Spare Parts Packages
- (6) Operation & Maintenance Manuals
- (1) Day On-Site Technical Assistance\*

\*Includes Estimated Expenses, based upon 2 week notice. Additional expenses incurred due to shortened lead time, changes in itineraries, or other changes may incur additional charges.

(1) Year Duperon Standard Warranty

#### **OPTIONAL ITEMS:**

(8) Controls - DC Standard Nema 4X Packages\*

\*Purchasing controls from Duperon is optional, however if a Duperon package is not selected, then it is strongly recommended that Duperon review/approve controls plan to insure they meet equipment specifications and maintain integrity of warranty.

- (1) Additional Days On-Site Technical Assistance
- (4) Freight (estimated 4 dedicated trucks)

#### PRICE BREAKDOWN:

1 LOT: (8) Heavy Duty Model FlexRake® Units Shipping Fully Assembled Per SCOPE OF SUPPLY	\$	103,500.00	ea	\$	828,000.00	lot
(8) Steel Premiums	\$	2,225.00	ea	\$	17,800.00	lot
	\$	105,725.00	Each	\$	845,800.00	Lot
	·		÷			
on II: (8) Heavy Duty Rake Only Model FlexRake® Units						
LOT: (8) Heavy Duty Rake Only Model FlexRake® Units     Shipping Partially Assembled     Per SCOPE OF SUPPLY	\$	70,500.00	ea	\$	564,000.00	lot
	\$	70,500.00	Each	\$	564,000.00	Lot
DPTIONAL ITEMS:						
	\$ 3,50	0 - \$ 9,000	ea	\$ 28,000	0 - \$ 72,000	lot
DPTIONAL ITEMS:  8) Controls - DC Standard Nema 4x Packages Range:  1) Additional Day On-Site Technical Assistance*  *Includes Estimated Expenses, based upon 2 week notice. Additional expenses incurred due to shortened lead time, changes in litheraries, or other changes may incur additional charges.	\$ 3,50	0 - \$ 9,000	ea	\$ 28,000 \$	0 - \$ 72,000 1,500.00	

Please note that pricing is based upon Duperon Standard Specifications. Prices do not include taxes.

#### **SCOPE DOES NOT INCLUDE:**

Taxes Site Work Discharge System or Container Installation or Assembly Anchor Bolts

**STANDARD DELIVERY:** (may be impacted upon workload at time of order)

Engineering Submittal

2-6 weeks after receipt of order

Production

8-16 weeks after submittals approvals

#### **TERMS:**

Subject to acceptance by our credit department. Provision for retainage is not included in this proposal. Pricing is subject to changes based upon time of order and current stainless steel prices. Terms may be negotiated upon request. Price is valid for thirty days.

Thank you for considering Duperon Corporation for your screening requirements. Please feel free to contact us at 800.383.8479 if you have any questions.

Sincerely,

Lorene Bruns

Ms. Lorene Bruns **Duperon Corporation** 

Ref: inclc

Sent via email

#### **RIGHT TO REFUSE:**

This proposal is based upon the information available at this time and may be impacted by future specifications, scope, and other requirements. This information may be relied upon and used for project estimating purposes only. Due to the current volatility of the steel market, prices may be impacted at time of order. Please be advised that Duperon Corporation retains the right to revise, withdraw, or negotiate this offer at any time prior to signing a material contract.

#### Ron Larson 6/16/06

Rick,

This is a budgetary quote inclusive of the 4160V MCC (MVMCC) and the 480V MCC (MCC-1)  $^{\prime\prime}$ 

(For reference, Ideal Electric's quote for the MVMCC only was \$215k).

Ron

----Original Message----

From: gregory.wolfe@us.schneider-electric.com [mailto:gregory.wolfe@us.schneider-electric.com]

Sent: Thursday, June 15, 2006 4:29 PM

To: Larson, Ron Subject: SWFWMD

\$252K (budget) for MV & LV.

Regards, Greg Wolfe, SSE Schneider Electric / Square D Company 2300 Maitland Center Pkwy, St #215 Maitland, Florida 32751

Direct: 407-389-2330 Fax: 859-372-1485 Cell: 407-973-7041

gregory.wolfe@us.schneider-electric.com



# Hydro-Air Systems, Inc.

220 N. Boyd Street, Winter Garden, Fl 34787 Ph: (407) 905-8850 Fax: (407) 905-4083 www.HydroAirDesign.com

## Engineering Estimate

HDR Engineering 128 S Tryon Street, Suite 1400 Charlotte, North Carolina 28202 Attn: Richard Glassen

Re: C44 Reservoir and STA Project

#### No. 06-006192006

June 19, 2006
Delivery 12-14 weeks after receipt
of order and approved drawings
FOB: Factory freight allowed to
jobsite
Terms of payment 95% net 30
days from date of shipment 5%

We propose to furnish one Hydropneumatic Tank System, and one Vacuum Priming System, complet including the following equipment and services per our interpretation of request.  A 1 500 gallon Hydropneumatic Tank 48" dia. x 6"-1" OAL, ASME code and stamped for 100 psi WP (2) two 6" high saddles welded to the tank, (1) one 12" x 16" eliptical manway, litting lugs, (2) two flanged outlets, (1) one 2" threaded drain, (10) ten outlets 2" or less, interior to be SP10 prep and coated with NSF approved potable epoxy, the exterior to be SP10 prep and coated with epoxy prime  B 1 Pressure Gage, 4", liquid filled, 0-100 psi with isolation valve  C 1 Safety Valve, 2" NPT, set @ 100 psi  Vacuum Safety Valve, 2" NPT, set @ 10 Hg  Hydro-Air Combination probewell level gauge  7 1 3/4" universal quick coupling with isolation valve  H 1 Whitewater Manufacturing Co., Air-Rite Model 610 air volume control, dual voltage (115/208,1,60), oil-less air compressor, solid state liquid level switch, pressure switch, probe and weatherproof enclosure.  Total Items A-H \$15,065.00  I Vacuum Priming System, complete to include, duplex Nash vacuum pumps, rated at 400 SCFM, mounted on a 300-gallon (40 CF) ASME code tank with all controls and appurtenances per specifical Total Item I \$35,000.00  All submittal data, performance curves, descriptive literature, ASME tank certification, operating and maintenance manuals and the services of a field engineer to inspect the installation, supervise initial start-up, run field tests and instruct the owner in the proper operation and maintenance of the equipment and the complete system.	•	1 -	upon completion of start-up.
Including the following equipment and services per our interpretation of request.  A 1 500 gallon Hydropneumatic Tank 48" dia. x 6'-1" OAL, ASME code and stamped for 100 psi WP (2) two 6" high saddles welded to the tank, (1) one 12" x 16" eliptical manway, lifting lugs, (2) two flanged outlets, (1) one 2" threaded drain, (10) ten outlets 2" or less, interior to be SP10 prep and coated with NSF approved potable epoxy, the exterior to be SP10 prep and coated with NSF approved potable epoxy, the exterior to be SP10 prep and coated with epoxy prime  B 1 Pressure Gage, 4", liquid filled, 0-100 psi with isolation valve  C 1 Safety Valve, 2" NPT, set @ 100 psi  D 1 Vacuum Safety Valve, 2" NPT, set @ 10 Hg  E 1 Hydro-Air Combination probewell level gauge  F 1 3/4" universal quick coupling with isolation valve  H 1 Whitewater Manufacturing Co., Air-Rite Model 610 air volume control, dual voltage (115/208,1,60), oil-less air compressor, solid state liquid level switch, pressure switch, probe and weatherproof enclosure.  Total Items A-H \$15,065.00  I Vacuum Priming System, complete to include, duplex Nash vacuum pumps, rated at 400 SCFM, mounted on a 300-gallon (40 CF) ASME code tank with all controls and appurtenances per specificat  Total Item I \$35,000.00  All submittal data, performance curves, descriptive literature, ASME tank certification, operating and maintenance manuals and the services of a field engineer to inspect the installation, supervise initial start-up, run field tests and instruct the owner in the proper operation and maintenance of the equipment and the complete system.	<u>Item</u>	Qty	
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D 1 Vacuum Safety Valve, 2" NPT, set @ 10 Hg  E 1 Hydro-Air Combination probewell level gauge  F 1 3/4" universal quick coupling with isolation valve  H 1 Whitewater Manufacturing Co., Air-Rite Model 610 air volume control, dual voltage (115/208,1,60), oil-less air compressor, solid state liquid level switch, pressure switch, probe and weatherproof enclosure.  Total Items A-H \$15,065.00  I Vacuum Priming System, complete to include, duplex Nash vacuum pumps, rated at 400 SCFM, mounted on a 300-gallon (40 CF) ASME code tank with all controls and appurtenances per specificate  Total Item I \$35,000.00  All submittal data, performance curves, descriptive literature, ASME tank certification, operating and maintenance manuals and the services of a field engineer to inspect the installation, supervise initial start-up, run field tests and instruct the owner in the proper operation and maintenance of the equipment and the complete system.	В	1	Pressure Gage, 4", liquid filled, 0-100 psi with isolation valve
Hydro-Air Combination probewell level gauge  Hydro-Air Combination probewell level gauge  Whitewater Manufacturing Co., Air-Rite Model 610 air volume control, dual voltage (115/208,1,60), oil-less air compressor, solid state liquid level switch, pressure switch, probe and weatherproof enclosure.  Total Items A-H \$15,065.00  Vacuum Priming System, complete to include, duplex Nash vacuum pumps, rated at 400 SCFM, mounted on a 300-gallon (40 CF) ASME code tank with all controls and appurtenances per specificate.  Total Item I \$35,000.00  All submittal data, performance curves, descriptive literature, ASME tank certification, operating and maintenance manuals and the services of a field engineer to inspect the installation, supervise initial start-up, run field tests and instruct the owner in the proper operation and maintenance of the equipment and the complete system.	С	1	Safety Valve, 2" NPT, set @ 100 psi
H  1 3/4" universal quick coupling with isolation valve  Whitewater Manufacturing Co., Air-Rite Model 610 air volume control, dual voltage (115/208,1,60), oil-less air compressor, solid state liquid level switch, pressure switch, probe and weatherproof enclosure.  Total Items A-H  \$15,065.00  Vacuum Priming System, complete to include, duplex Nash vacuum pumps, rated at 400 SCFM, mounted on a 300-gallon (40 CF) ASME code tank with all controls and appurtenances per specificate.  Total Item I  \$35,000.00  All submittal data, performance curves, descriptive literature, ASME tank certification, operating and maintenance manuals and the services of a field engineer to inspect the installation, supervise initial start-up, run field tests and instruct the owner in the proper operation and maintenance of the equipment and the complete system.	D	1	Vacuum Safety Valve, 2" NPT, set @ 10 Hg
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oil-less air compressor, solid state liquid level switch, pressure switch, probe and weatherproof enclosure.  Total Items A-H \$15,065.00  Vacuum Priming System, complete to include, duplex Nash vacuum pumps, rated at 400 SCFM, mounted on a 300-gallon (40 CF) ASME code tank with all controls and appurtenances per specificat  Total Item I \$35,000.00  All submittal data, performance curves, descriptive literature, ASME tank certification, operating and maintenance manuals and the services of a field engineer to inspect the installation, supervise initial start-up, run field tests and instruct the owner in the proper operation and maintenance of the equipment and the complete system.	F	1	3/4" universal quick coupling with isolation valve
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Total Item I \$35,000.00  All submittal data, performance curves, descriptive literature, ASME tank certification, operating and maintenance manuals and the services of a field engineer to inspect the installation, supervise initial start-up, run field tests and instruct the owner in the proper operation and maintenance of the equipment and the complete system.			Total Items A-H \$15,065.00
All submittal data, performance curves, descriptive literature, ASME tank certification, operating and maintenance manuals and the services of a field engineer to inspect the installation, supervise initial start-up, run field tests and instruct the owner in the proper operation and maintenance of the equipment and the complete system.	1	1	Vacuum Priming System, complete to include, duplex Nash vacuum pumps, rated at 400 SCFM, mounted on a 300-gallon (40 CF) ASME code tank with all controls and appurtenances per specification.
maintenance manuals and the services of a field engineer to inspect the installation, supervise initial start-up, run field tests and instruct the owner in the proper operation and maintenance of the equipment and the complete system.			Total Item I \$35,000.00
This proposal is based on current steel prices and is subject to the availability and price of	J		maintenance manuals and the services of a field engineer to inspect the installation, supervise initial start-up, run field tests and instruct the owner in the proper operation and maintenance of the
steel at time of order.			This proposal is based on current steel prices and is subject to the availability and price of steel at time of order.
K Items not included: Inter-connecting piping, wiring, valves (except as noted above), mounting brackets, pumps, foundation bolts and installation.	κ		Items not included: Inter-connecting piping, wiring, valves (except as noted above), mounting

Total freight allowed excluding all applicable taxes

\$50,065.00

Bart	Kn	es

#### Air-Rite Air Volume Control Hydropneumatic Tank System

#### HYDROPNEUMATIC TANK FABRICATION:

The tank shall be of welded steel construction meeting the requirements of, ASME section V111 Division 1 code and be provided with the necessary piping connections and accessories. All inside corners and edges shall be ground to 3/16" radius. Working pressure shall be 100 psig and shall be pressure tested at 130 psig, in accordance with the ASME Unfired pressure Vessel code. The Hydropneumatic tank shall be 48" diameter by 6'-1" OAL and have a nominal capacity of 500 gallons. The tank shall be furnished with one (1) 12" x 16" Manway, Safety relief valve set 100 psi, vacuum relief valve, pressure gauge 4" dial 0-100 psi with gauge cock, one(1) 2" combination probewell and level gage and two steel saddles welded to the tank shell. The interior shall be epoxy coated for potable water and the exterior sand-blasted and primed (finish coat to be applied after installation).

#### AIR VOLUME CONTROL:

The system shall include an Air volume control to insure the proper air to water ratio in the tank at all times. The air volume control system shall have an oil-less air compressor, solid-state liquid level switch, pressure switch, probe and weatherproof enclosure. The system shall be Air-Rite Model 610, 115/1/60. The air volume control system shall be mounted in the combination probewell as shown on the drawings.

#### SETTING THE TANK:

The Hydropneumatic tank shall be set in place as indicated on the drawings. The tank appurtenances shall be installed as required to provide a complete and functional system including all piping, wiring, valves and fittings. After the system is installed the Hydropneumatic tank system supplier shall provide the services of a qualified representative to inspect the installation, supervise startup, run field tests and instruct the owners personnel in the proper operation and maintenance of the equipment and the complete system.

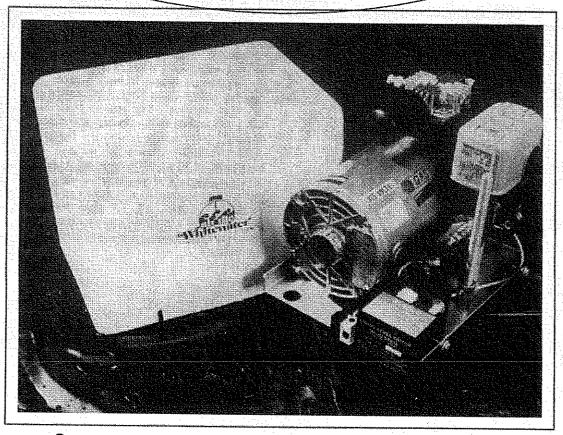
#### ACCEPTABLE MANUFACTURES

The complete system including all equipments and services shall be furnished by a single supplier and shall be as supplied by Hydro-Air Systems, Inc. Winter Garden, Florida (407-905-8850)or approved equal.

# ... the answer to an efficient, complete, aircharging system for Hydropneumatic Tanks!

Distinctive Features Include:

— Dual Voltage
Solid State Liquid Level Switch
Long Life Oil-less Compressor - Adjustable Pressure Switch
Fast Simple Installation - One Year Warranty
Backed by technical advice
from our trained management staff

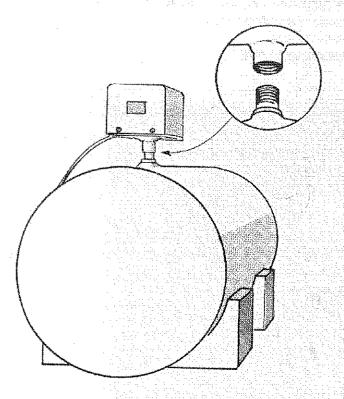


Whitewater, WI 53190 (262) 473-3100 FAX (262) 473-4324

# Easy to install, maintenance free.

#### Important Features . . .

The Air Rite Air Volume Control is a completely self contained air charging system. The control has only three basic components: an oil-less air compressor, an encapsulated solid state liquid level switch (with isolated electrode circuit and time delay), and a pressure switch. All of the components are enclosed in a fiberglass cover rendering the entire unit weather-proof. This patented design makes it possible to install the control in a fraction of the time that it takes to install an air volume control system utilizing a separate air compressor. Water containing minerals creates no special problem for the control because the only contact with the water is via the stainless steel corrosion resistant electrode. The control requires very little maintenance, providing years of trouble-free service.



#### Operating Principle . . .

The control is composed of three primary elements: the liquid level switch, the pressure switch, and the compressor. The liquid level switch senses the water level in the tank via the electrode suspended into

the tank from the controls base. At the same time the pressure switch monitors the air pressure in the tank. If the water level begins to rise above the electrode and the air pressure in the tank is below the setting on the pressure switch the compressor will begin to pump air into the tank. The compressor will continue to pump air until an adequate air pressure is reached or until the water level falls below the electrode. A time delay in the liquid level switch prevents waves in the tank from causing rapid cycling of the compressor. Since the air in the tank is lost rather slowly by absorption into the water, the control is continuously monitoring the air charge in the tank and the optimum air charge is maintained. Continual monitoring of tank pressure is very important because pressure changes result from both air to water absorption and changing water levels.

# Advantages over other types of Air Charging Systems . . .

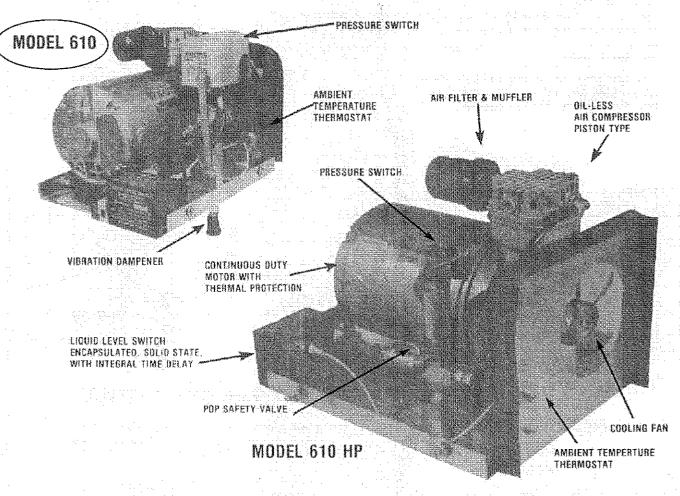
Experienced water supply system designers agree that no type of air volume control is better than a motor driven air compressor controlled by an electrode that senses the water level in a hydropheumatic tank. One obvious advantage to the Air Rite Air Volume Control is that it attaches directly to the hydropneumatic tank. No need to worry about long cumbersome pressure hoses or electrode wires. The patented Air Rite design provides a complete motor driven air compressor (good for approx. 4000 working hours)\* integrated in an air volume control system all in one easy to install enclosure. No additional parts are needed other than a 2" pipe nipple and an electrical supply line. Lastly, the controls are completely protected from the elements rain, hall, snow, ice, or wind - that may be encountered by a hydropneumatic tank. Any pump installer or maintenance man can install an Air Rite Control in minutes.

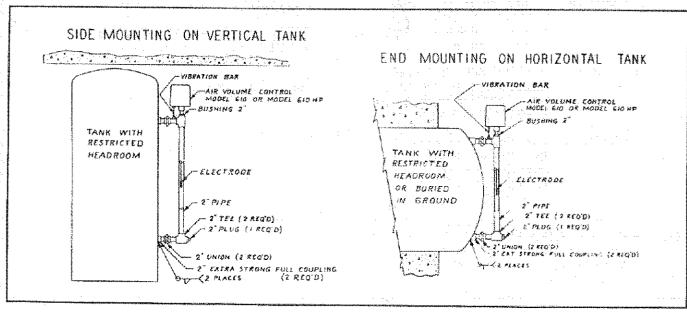
#### Warranty . . .

All Air Rite parts carry a one year limited warranty on all parts and workmanship.

Depending on the operating conditions of your unit.

# AIR RITE Air Volume Combols





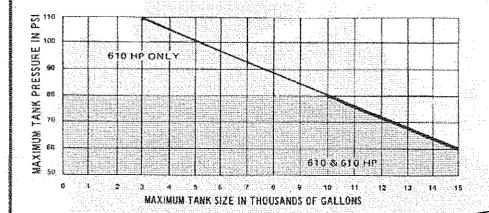
## **(TECHNICAL DATA)**

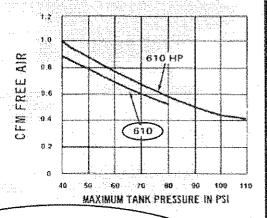
- 보통하다 보인 사진에 대한테 한번인 하다는 이번 전에 되는 다음을 하는 보고 있다면 하는 사람들이 다른 사람들이 다른 사람들이 다음을 하는데 없다는데 다음을 하는데 없다는 다음을 하는데 없다.		r - Bridger Grandyer
Air Rite Control Model Number	<b>/610**</b> \	610HP**
Maximum Tank Size in Gallons	/ 15.000° \	15.000*
Maximum Tank Pressure in PSI	/ 80° \	110*
Operating current in amperes for 115/230 volt	1 3.4/2	3.4/2
Control pressure switch factory setting in PSI (shift off)	50	80/81
	adjust	adjust
Tank connector size	1-1/2"NPT	2"NPT
Space required over top of tank; Length x Width x Height in inches (Note:	\ '	
Fiberglass cover must be in place at all times - inside and out - for air move-	All when the bold	94.7 120.0
ment)	10x14x17	10x14x17
Shipping wt. in lbs.	\35 /	35

\*See trade-off graph for maximum tank pressure which can be used with a particular tank size.

Min. Pressure 40 PSI For 610 HP.

\*\*All models are single phase, and dual voltage.





#### TRADE OFF GRAPH

# EXAMPLE 1: If the water pump capacity is greater than 10% of the Tank capacity you must use

a 610 HP.

EXAMPLE 2: A 610 can be used on a 2,000-10,000 gallon tank

pressure of 80 PSI.

EXAMPLE 3: A 12,000 gallon tank could be operated at a pressure of

up to 72 PSI - either the 610 or 610 HP would work.

with a maximum working

EXAMPLE 4: If the pump must operate in

the range of 80/100 PSI, maximum tank size is 5,300 gallons and only the 610 HP

would work.

SPECIFY: Air Rite and save time, money and worry. Procurement, installation and maintenance are reduced to an absolute minumum when you use Air Rite Air Volume Controls.

#### **COMPRESSOR DELIVERY**

THIS DATA IS BASED UPON A DIFFERENTIAL OF 20 PSI BETWEEN WATER PUMP "START" AND "STOP" PRESSURE.

MODEL 610 has a pumping differential of 14 PSI between stop and start.

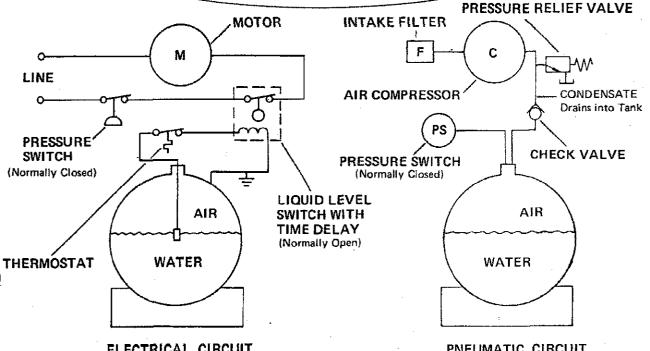
MODEL 610 HP has a pumping differential of 9 PSI between stop and start.

**DISTRIBUTED BY:** 

Note: The System Pumping
Differential MUST be a minimum of 20
PSI for Proper Air Volume Control

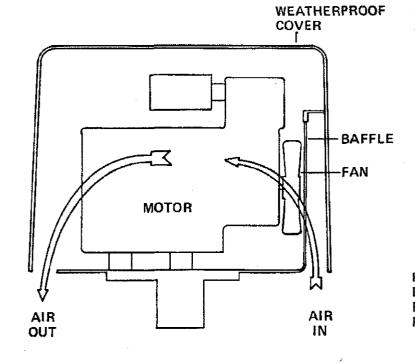
# PRINCIPLE OF OPERATION OF THE

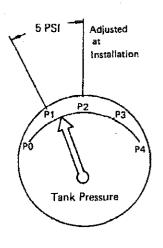
AIR RITE, AIR VOLUME CONTROL



ELECTRICAL CIRCUIT

PNEUMATIC CIRCUIT

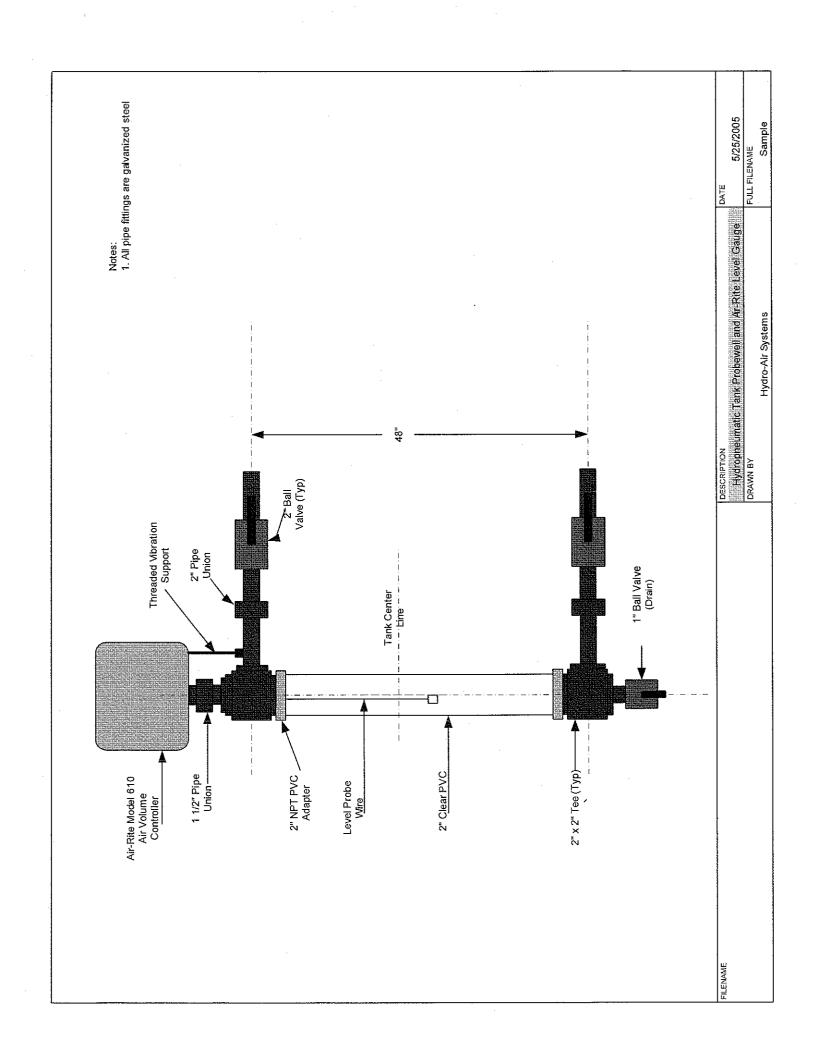




P1 WATER PUMP STARTS P2 AIR COMPRESSOR STARTS Р3 AIR COMPRESSOR STOPS **WATER PUMP STOPS** 

COOLING AIR FLOW PATH

PRESSURE RELATIONSHIPS



From:

Scott Stanley [s.stanley@gaeicc.com]

Sent:

Tuesday, June 20, 2006 12:24 PM

To:

Glassen, Richard

Subject:

C44 Reservoir PS Air compressors

Attachments: HDR Cover page.doc; H06-2573, HDR, SFWMD SF15 & GX7.doc

Richard, here is your budget price for the C44 SFWMD project. I have included a lubricated as well as the oil-free system offering.

The oil-free Scroll Package is a Multicore (4ea.) 5 hp pump package sized for three pumps running with the fourth as a rotating spare. It will also only have as many units on line as the system demands using the onboard sequencing. Call me if you have any questions!

Thanks,

Scott Stanley VP Sales Gulf Atlantic Equipment 904-636-8555 1-800-329-4853 Fax 904-636-8554 Cell 904-631-1338 s.stanley@gaeicc.com www.gaeicc.com



# SFWMD



Solicitation/Project: Richard Glassen / C44

Project, SFWMD

**GAE Proposal:** 

June 20, 2006

for

# Air Compressor / Dryer Systems

June 20, 2006

Gulf Atlantic Equipment, Inc.

# Scott Stanley, VP Sales

Technology

Equipment

Service

Jacksonville 4691 Dusk Court Jacksonville, FL 32207 904.636.8555 904.636.8554 Fax

South Florida 3701 SW 47<sup>th</sup> Avenue Unit 103 Davie, FL 33314 954.583.2843 (Broward) 305.591.9733 (Dade) 954.583.3218 Fax Tampa 1100 North 50<sup>th</sup> Street Building 4, Unit E Tampa, FL 33619 813.247.7231 813.248.0007 Fax Orlando 102 Drennen Road, Unit C2 Orlando, FL 32806 407.856.9025 407.856.9038 Fax



# HDR / SFWMD Air Compressor & Dryer System Options

Project for:

C44 Budget

GAE Proposal:

H06-2573

Date:

June 19, 2006

Submitted by:

Scott Stanley, Gulf Atlantic Equipment

#### **Lubricated Equipment System Option Description**

#### ITEM 1:

**2 ea.** Atlas Copco Model GX7FF-150TM80, 230-460/3/60, 10 Hp Air-cooled Lubricated tank mounted Rotary Screw Compressor with integrated refrigerated air dryer. Capacity is 31 CFM @ 100 PSIG for each compressor.

#### includes the following:

- TEFC/ HE Motor
- Load / unload inlet control
- DOL Starter with overload
- · Spin on separator and oil filter
- Low sound enclosure
- Electropneumatic controls
- Inlet filter
- Air-cooled aftercooler and oil cooler
- 80 gallon horizontal receiver with auto drain
- Integrated Refrigerated Air Dryer for 35-38°F Dewpoint
- .01 micron final line filter

Net Price each including start-up...... \$7,900.00 ea.

#### ITEM 2:

1 ea. Atlas Copco Model OSC95, Oil/Water separator to process oily condensate discharge from compressors.

Net Price...... \$678.00

Total Lubricated System Budget price...... \$16,478.00

Technology

Equipment

Service

#### ITEM 1:

**1 ea.** Atlas Copco Model SF15FF-100, 460/3/60, 20 Hp Air-cooled Oil-less Stacked Multicore Scroll Compressor. Capacity is 52.3 CFM @ 100 PSIG.

#### Includes the following:

- (4) Oil-less Scroll Compressors
- (4) 5 hp TEFC / High Efficiency motors / belt drive
- (4) DOL Starters with overloads
- Six sided low sound enclosure
- Elektronikon Microprocessor control with on board sequencing
- Inlet filter / silencer
- Air-cooled aftercooler
- Integrated Refrigerated Air Dryer for 35-38°F dewpoint

Net Price including start-up...... \$23,983.00

#### ITEM 2:

1 ea. Silvan Receiver and filter, 120 gallon vertical.

#### Includes the following:

- 120 gallon 200 MWP vertical ASME Stamped receiver
- Liquid filled gauge / relief valve / drain
- Loose .01 micron final line filter

Net Price...... \$1,175.00

Total Oil-free System Budget price ...... \$25,158.00

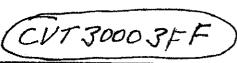
Prices do not include tax or installation and are good for 60 days from date of proposal. Freights are FOB Factories
Factory Start-up is included – one trip

Thank you for the opportunity. Please call if you have any questions.

Best regards,

# W. Scott Stanley

Scott Stanley, VP Sales Gulf Atlantic Equipment Englan





The Industry Leader In Above Ground Fuel Storage Systems

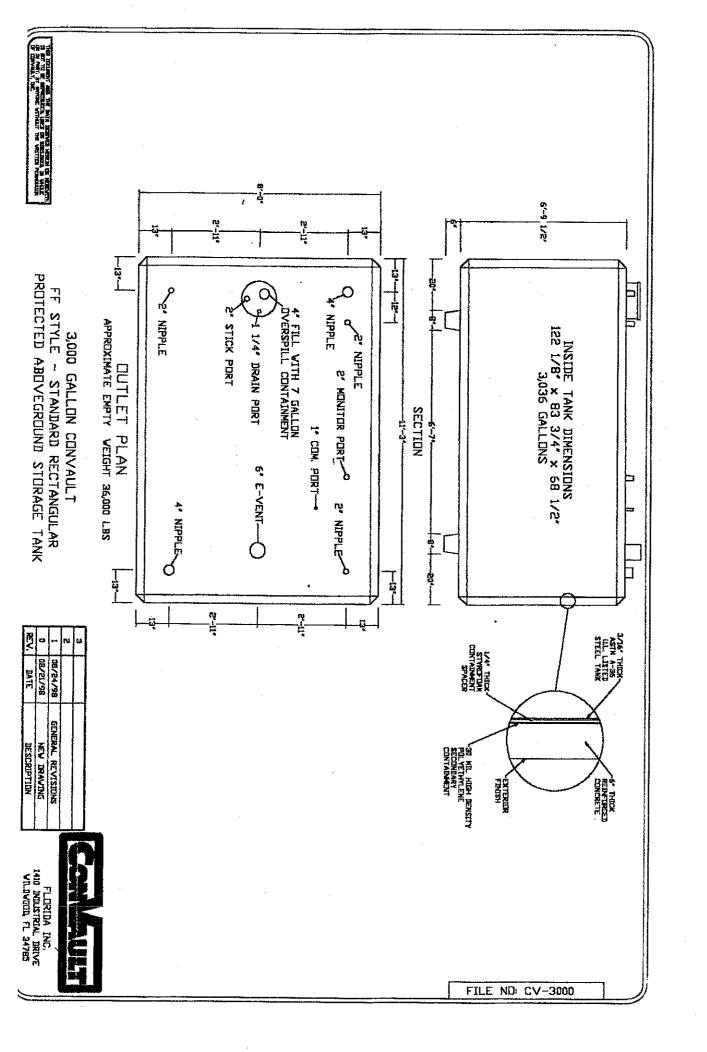
#### SPECIFICATIONS FOR RECTANGULAR ABOVEGROUND STORAGE TANKS

- 1. The Insulated Secondary Containment Aboveground Storage Tank Systems for Flammable and Combustible Liquids, Protected Type: Vehicle Impact Protected, and Projectile Resistant shall be tested to and listed for the following:
  - A. UL 142, aboveground steel tanks for flammable and combustible liquids.
  - B. UL 2085, two-hour furnace fire test and two hour simulated pool fire test for insulated and protected tanks.
  - C. UL 2085 and UFC Test Standard (Article 79 or APPENDIX #A-II-F 1), for both Vehicle Impact Protection and Projectile Resistance.
  - **D.** UL 2085, Protected aboveground tanks for flammable and combustible liquids.
  - E. UL 2085, Non-Metallic Secondary Containment protected tanks for flammable and combustible liquids with secondary containment Emergency Venting by "Form of Construction".
  - F. CAN/ULC-S601 (ORD 142.18), Standard for shop fabricated steel aboveground horizontal tanks for flammable and combustible liquids.
  - G. CAN/ULC- S655 (ORD C 142.16), Standard for protected aboveground tank assemblies for flammable and combustible liquids.
  - H. CAN/ULC- (ORD C 142.5), Standard for concrete encased aboveground tank assemblies for flammable and combustible liquids.
  - I. CAN/ULC- (ORD C 142.16), the furnace burn requirements for two hour fire rating.
  - J. CAN/ULC- (ORD C 142.25), the open (pool) fire testing for two-hour flammable liquid fire test.
  - K. CAN/ULC- (ORD 142.23), for aboveground tanks for used oil.



#### The Industry Leader In Above Ground Fuel Storage Systems

- 11. No steel or insulating material shall come in contact with the concrete or other corrosive material.
- 12. All openings shall be from the top only.
- 13. All exposed metal must be powder coated to inhibit corrosion.
- 14. The protected and insulated AST systems shall include a 7 or 15-gallon powder coated, UL listed spill containment, and shall include normally closed valve to release spilled product into the primary steel tank. Spill containment which route the spilled product into interstitial area will not be approved.
- 15. The protected and insulated AST systems shall have a coated concrete exterior to resist weather and reflect sunlight. Models with steel exteriors will not be approved.
- 16. The protected and insulated AST systems shall have a warranty of 30 years for systems 2,000 gallon capacity and larger and 20 years for systems 1,000 gallon capacity and smaller with optional 30-year warranty.
- 17. The protected and insulated AST systems design shall have been in use for a minimum of eighteen (18) years. The manufacturer must stipulate no reportable AST containment system failure in 28,000 units produced.
- 18. The protected and insulated AST systems shall have two (2) bolts for connecting grounding conductors for lightning protection in accordance with NFPA 780.



#### SLAB SPECIFICATIONS AND FOUNDATION REQUIREMENTS

- 1. All concrete to have 28 day compressive strength of 4000 psi.
- Reinforcing steel shall comply with ASTM A615 Grade 60 or ASTM A706 Grade 60. Bar bending and placement shall comply with the latest ACI Standards.
- 3. Equivalent area Fy= 65000 psi ASTM A185 or A 497 reinforcing cages may be unitized in lieu of Grade 60 reinforcing bars.
- 4. The following minimum soil characteristics may be used if the Convault tank is installed on a continuous solid slab which will uniformly distribute the weight of the tank and its contents to the soil:
  - A) Bearing Capacity: minimum 1,000 but preferably 2,000 lb. per sq. ft.
  - B) Total settlement: 1 inch maximum.
  - C) Differential settlement: 1/2 inch maximum.
  - D) Provide a minimum six inch (6") thick granular sub-grade, compacted and graded to a level uniform subsurface prior to the cast slab placement or pouring of the cast-in-place slab.
  - E) A geological engineer should evaluate the effect of the water table and frost lines if such unusual conditions exist at the site.
  - F) Soil surface under foundation should be flat within 1/16" per foot. Soil around foundation should be sloped away 1/8" per foot minimum for 5 feet.
  - G) NOTE: If bearing pads are used under the tank legs instead of grouting, the tank foundation and slab should be designed to withstand concentrated loads under the bearing pads.
  - H) NOTE: The above soil characteristics, foundation and slab design requirements may be revised by a qualified design engineer who would design the foundation and the slab on a site-specific basis.
  - I) NOTE: Some Authorities having jurisdiction require up-lift restraints for areas subject to flooding and hurricanes.

Con Vault Florida, Inc. 1410 Industrial Dr. P.O. Box 238 Wildwood, FL 34785 1-800-642-1540 Fax 1-352-748-6820 Con Vault Florida, Inc. 1410 Industrial Dr. P.O. Box 238 Wildwood, FL 34785 1-800-642-1540 Fax 1-352-748-6820

# CONVAULT FLORIDA TANK OVERTURNING & SLIDING

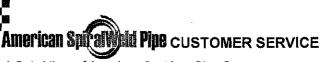
#### ANSI/ASCE 7-98

Max Wind Velocity 150 mph, Exposure C, Category 1 Table 6-3A - Wind force varies with projected area

									1	100	•
Area	d	P	OTM	Weight	b	Wtxb	$FS_{ot}$	Wt x 0.3	F	FS <sub>slide</sub>	
							:				
			2204	6200	1 6/15	10199	3.3	1860	1457	1.3	
			.,						2178	1.1	1
22.38	1.79	97.3								1.2	1
33.0	1.83	93.9	5671	12000							1
	2.33	90.3	9258	18000	2.44	43920					4
			14967	30000	3.5625	106875	7.1	9000			4
					3.5625	128250	4.9	10800	6671	1.6	1
				<del> </del>		156750	5.0	13200	8990	1.5	
								13050	8663	1.5	1
100.62	4.64	86.1								2.1	7
84.5	3.75	86.8	<b>27</b> 505	51000							1
128 19	4.64	85.2	50677	52000	3.5625						$\dashv$
			56877	60000	3.5625	213750	3.7	<del>                                     </del>			-
				70000	3.5625	249375	3.4	21000			4
1		<del></del>				295688	3.3	24900	18981	1.3	
<del></del>				<u> </u>				27900	22096	1.3	
281.84	4.64	78.4	102527	93000	3.3023	331312	<u> </u>		1	<u>.1</u>	
	14.6 22.38 33.0 44.0 58.18 76.41 104.41 100.62 84.5 128.19 145.41 190.87 236.38	14.6 2.13 22.38 1.79 33.0 1.83 44.0 2.33 58.18 2.92 76.41 3.896 104.41 3.47 100.62 4.64 84.5 3.75 128.19 4.64 145.41 4.64 190.87 4.64 236.38 4.64	14.6     2.13     99.8       22.38     1.79     97.3       33.0     1.83     93.9       44.0     2.33     90.3       58.18     2.92     88.1       76.41     3.896     87.3       104.41     3.47     86.1       100.62     4.64     86.1       84.5     3.75     86.8       128.19     4.64     85.2       145.41     4.64     84.3       190.87     4.64     82.3       236.38     4.64     80.3	14.6     2.13     99.8     3104       22.38     1.79     97.3     3898       33.0     1.83     93.9     5671       44.0     2.33     90.3     9258       58.18     2.92     88.1     14967       76.41     3.896     87.3     25989       104.41     3.47     86.1     31194       100.62     4.64     86.1     40198       84.5     3.75     86.8     27505       128.19     4.64     85.2     50677       145.41     4.64     84.3     56877       190.87     4.64     82.3     72888       236.38     4.64     80.3     88073	14.6       2.13       99.8       3104       6200         22.38       1.79       97.3       3898       8000         33.0       1.83       93.9       5671       12000         44.0       2.33       90.3       9258       18000         58.18       2.92       88.1       14967       30000         76.41       3.896       87.3       25989       36000         104.41       3.47       86.1       31194       44000         100.62       4.64       86.1       40198       43500         84.5       3.75       86.8       27505       51000         128.19       4.64       85.2       50677       52000         145.41       4.64       84.3       56877       60000         190.87       4.64       82.3       72888       70000         236.38       4.64       80.3       88073       83000	14.6       2.13       99.8       3104       6200       1.645         22.38       1.79       97.3       3898       8000       1.48         33.0       1.83       93.9       5671       12000       1.85         44.0       2.33       90.3       9258       18000       2.44         58.18       2.92       88.1       14967       30000       3.5625         76.41       3.896       87.3       25989       36000       3.5625         104.41       3.47       86.1       31194       44000       3.5625         100.62       4.64       86.1       40198       43500       3.5625         128.19       4.64       85.2       50677       52000       3.5625         145.41       4.64       84.3       56877       60000       3.5625         190.87       4.64       82.3       72888       70000       3.5625         236.38       4.64       80.3       88073       83000       3.5625	Area       d       F       OTM       Total         14.6       2.13       99.8       3104       6200       1.645       10199         22.38       1.79       97.3       3898       8000       1.48       11840         33.0       1.83       93.9       5671       12000       1.85       22200         44.0       2.33       90.3       9258       18000       2.44       43920         58.18       2.92       88.1       14967       30000       3.5625       106875         76.41       3.896       87.3       25989       36000       3.5625       128250         104.41       3.47       86.1       31194       44000       3.5625       156750         100.62       4.64       86.1       40198       43500       3.5625       154969         84.5       3.75       86.8       27505       51000       5.52       281520         128.19       4.64       85.2       50677       52000       3.5625       185250         145.41       4.64       84.3       56877       60000       3.5625       213750         190.87       4.64       82.3       7288       7000	Area       d       I       O 101       Rough         14.6       2.13       99.8       3104       6200       1.645       10199       3.3         22.38       1.79       97.3       3898       8000       1.48       11840       3.0         33.0       1.83       93.9       5671       12000       1.85       22200       3.9         44.0       2.33       90.3       9258       18000       2.44       43920       4.7         58.18       2.92       88.1       14967       30000       3.5625       106875       7.1         76.41       3.896       87.3       25989       36000       3.5625       128250       4.9         104.41       3.47       86.1       31194       44000       3.5625       156750       5.0         100.62       4.64       86.1       40198       43500       3.5625       154969       3.8         84.5       3.75       86.8       27505       51000       5.52       281520       10.2         128.19       4.64       85.2       50677       52000       3.5625       185250       3.6         145.41       4.64       84.3       56877<	Area       d       1       6141       6200       1.645       10199       3.3       1860         22.38       1.79       97.3       3898       8000       1.48       11840       3.0       2400         33.0       1.83       93.9       5671       12000       1.85       22200       3.9       3600         44.0       2.33       90.3       9258       18000       2.44       43920       4.7       5400         58.18       2.92       88.1       14967       30000       3.5625       106875       7.1       9000         76.41       3.896       87.3       25989       36000       3.5625       128250       4.9       10800         104.41       3.47       86.1       31194       44000       3.5625       156750       5.0       13200         100.62       4.64       86.1       40198       43500       3.5625       154969       3.8       13050         128.19       4.64       85.2       50677       52000       3.5625       185250       3.6       15600         145.41       4.64       84.3       56877       60000       3.5625       213750       3.7       18000	Area         d         P         OTM         Weight         S         10199         3.3         1860         1457           22.38         1.79         97.3         3898         8000         1.48         11840         3.0         2400         2178           33.0         1.83         93.9         5671         12000         1.85         22200         3.9         3600         3099           44.0         2.33         90.3         9258         18000         2.44         43920         4.7         5400         3973           58.18         2.92         88.1         14967         30000         3.5625         106875         7.1         9000         5126           76.41         3.896         87.3         25989         36000         3.5625         128250         4.9         10800         6671           104.41         3.47         86.1         31194         44000         3.5625         156750         5.0         13200         8990           100.62         4.64         86.1         40198         43500         3.5625         154969         3.8         13050         8663           84.5         3.75         86.8         27505         <	Area         d         P         O1M         Weight         B         WERR         Loc           14.6         2.13         99.8         3104         6200         1.645         10199         3.3         1860         1457         1.3           22.38         1.79         97.3         3898         8000         1.48         11840         3.0         2400         2178         1.1           33.0         1.83         93.9         5671         12000         1.85         22200         3.9         3600         3099         1.2           44.0         2.33         90.3         9258         18000         2.44         43920         4.7         5400         3973         1.3           58.18         2.92         88.1         14967         30000         3.5625         106875         7.1         9000         5126         1.7           76.41         3.896         87.3         25989         36000         3.5625         128250         4.9         10800         6671         1.6           104.41         3.47         86.1         31194         44000         3.5625         156750         5.0         13200         8990         1.5

OTM – Overturning moment = Area x P x d
Wt. x b – Righting moment
FS – Factor of Safety
Coefficient of Friction = 0.3, Resistence = Wt. x 0.3
F = Area x P





A Subsidiary of American Cast Iron Pipe Company 2916 North 16th Street - Birmingham, AL 35207 Toll Free Pn: (866) 442-2797; Fax: (866) 442-2798



6	<b>Pages</b>	(Including	This	One)

AMERICAN DUCTILE IRON PIPE

AMERICAN STEEL PIPE

AMERICAN FLOW CONTROL

AMERICAN CENTRIFUGAL

SPECIFICATION RUBBER COMPANY

WATEROUS COMPANY

AMERICAN SPIRALWELD PIPE COMPANY

Date: June 26, 2006 (Monday)

Attention: Richard L. Glassen / Joanne McDaniel

Company: HDR

Fax: (813) 282 - 2440

From: Bill Pohlman

Subject: Martin County, FL, Project

Message: Please find attached the Budget Quote that you requested.

Thank You,

12000

Bill Pohlman

Phone - (205) 325-8991

E mail - bpohlman@acipco.com

NOW BUDGET ON

39,000 4-72" X112" Increasor 14,2754-72" X48" (10' Cg) TEC 2086" 4-6" Fla OUTLETS



#### AMERICAN SpiralWeld Pipe Company, LLC

A Subsidiary of American Cast Iron Pipe Company

Orlando District Sales Office 2301 Maitland Center Parkway, Suite 430 Meitland, FL 32751 Phone: 407-560-8768 Fex: 407-560-1551

AMERICAN DUCHLE IRON PIPE AMERICAN STEEL, FIPE AMERICAN FLOW CONTROL AMERICAN CENTRIPUDAL SPECIFICATION RUBBER PRODUCTS WATEROUS COMPANY

June 21, 2006

Project #: Budget
Project Name: Stormwater from Canal C-44
Location: Martin County, FL
Bid Date: 06/23/2006
Revision Number: 0

#### Gentlemen:

We are pleased to submit our proposal covering steel piping materials based on our interpretation of the Engineer's E mail dated 6/16 & 6/17/06. This proposal is offered on the basis of our furnishing all materials shown and in the quantities listed, and it is not guaranteed for take-off accuracy or for interpretation of plans and specifications.

- 1. All prices are F.O.B. our plant, Columbia, South Carolina, and include freight for shipment to Martin County, FL, in truckload lots on passable roads, for you to unload. Any increases in freight charges resulting from change in rate or additions to rate, fuel surcharge, shipment by other means, shipment in smaller lots, notification charges, unloading delays, or for some other reason will be for your account. At least 48 hours' notice is required for scheduling shipments. Exact delivery times cannot be guaranteed, and AMERICAN will not be held responsible for any delivery delays caused by carriers.
- 2. Material prices quoted represent the current market price of steel and the applicable surcharge as of the date of this quotation. Final invoice prices will represent any increase in steel price and applicable surcharge at the time steel is shipped to our plant in Columbia, SC.
- 3. Our terms of payment are Net 30 days. A service charge invoice will be issued weekly against any material invoices that are more than 30 days past due. Material invoices that remain open from prior weeks will receive a service charge each Friday the invoice remains unpaid. In order to avoid service charges, checks should be postmarked no later than Monday of each week. The rate charged on the invoice will be .346% per week which is the equivalent of 1.5% per month and 18% per annum or the maximum allowed by law.
- 4. Payment must be mailed to and received at the designated "Remit To" location by Friday to avoid the weekly service charge. Our Credit department will issue wire transfer or other acceptable electronic transfer instructions if you so desire.
- 5. All material ordered will require a confirmed shipment date. Material must either ship within 30 days of the established shipment date or be invoiced to the Buyer in full as stored material. Additionally, storage charges may be assessed to the Buyer for materials not shipped within 30 days. Repairs required due to storage of pipe will be invoiced to the Buyer.
- 6. Prices do not include any local, state, or federal taxes. Applicable state and local taxes will be added to invoices unless a Tax Exemption Certificate is furnished in a form satisfactory to taxing authorities.
- 7. This proposal is subject to acceptance by purchase order or letter of intent within 30 days from the project bid date listed above. If an order is not placed within the 30-day period, the proposal is accordingly automatically withdrawn.
- 8. The final total price would be determined by the total of items shipped at unit prices shown and as may be modified per other paragraphs in this proposal. Any items ordered that are not described in this proposal are subject to a different price basis. In case of error in any extension on the quotation, unit prices would prevail.
- 9. Lead times to begin shipments are approximately \_\_\_\_\_\_ weeks after your full release of approved materials AND our receipt of required purchased items (i.e., steel coil, plate, flanges, etc), whichever is longer. Rates of shipment can be made at up to approximately \_\_\_\_\_\_ feet per week. The shipping schedules are subject to change and the promised shipment and rate of any materials would be based on the applicable schedules in effect at the time approved materials are released to our shop for manufacture. Accordingly, any delay in material being placed on order could cause appreciable increases in shipping schedules.
- 10. Bunks and metal stulls used during shipment are the property of AMERICAN and are to be grouped, re-

loaded, and returned to AMERICAN at the Buyer's expense, excluding return freight costs. Bunks are not to be used for storing pipe. Bunks not returned to AMERICAN will be invoiced to the Buyer at the applicable replacement costs. Stulls placed in the pipe are intended to stabilize the pipe during shipment. The contractor is responsible to verify and ensure roundness of pipe at the time of installation.

- 11. To assist you in determining the required bill of material, we will prepare engineered-to-order layout drawings for your approval. Our current lead-time for layout drawings is approximately 4 weeks. Prior to AMERICAN preparing layout drawings, a detailed review will be necessary of the following schedule requirements: starting location, laying direction, number of installation crews, field geometry verification, information regarding connection to existing lines, valve and/or meter dimensional information, requirements for short lengths, drawing details, and our overall drawing service. Additional engineering time beyond the original scope of the contract due to change orders or customer requests will be billed at \$150.00 per hour.
- 12. If necessary, AMERICAN will provide the services of a Field Service Representative for one visit to discuss with the Buyer's crew (s) the assembly requirements of the various joints. Any additional field service visits may be billable and will be addressed on a case-by-case basis. This service does not include any labor. AMERICAN will not be held responsible for any problems related to installation.
- 13. AMERICAN will not be held responsible for any backcharges resulting from anything beyond our control. AMERICAN must be notified immediately of any problems related to our product so that we may coordinate, participate in, or otherwise approve any corrective action. Any claim must be received by AMERICAN within 10 calendar days from the date of the occurrence.
- 14. AMERICAN will not be held responsible for any liquidated damages.
- 15. AMERICAN's terms and conditions of sale are a part of this proposal.
- 16. To simplify the bidding process, this proposal is offered in a form consistent with the bid form. We will welcome a signed contract consistent with the structure of this proposal. A confirming sales order acknowledgement will be forthcoming for billing and order modification purposes.

SALESMAN

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	J. W. M. E. Cullough use
ESTIMATOR Bill Pohlman	J. W. McCuilough
Purchaser:	AMERICAN SpiralWeld Pipe Company, LL
	P.O. Box 2727
Address:	Birmingham, AL 35202
Phone No.:	Phone No:
Accepted By:	Offered By:
Signature:	Name:
Name:	Title:
Title	

# AMERICAN CAST IRON PIPE COMPANY TERMS AND CONDITIONS OF SALE

- 1. All orders are subject to approval and acceptance by an authorized representative of Seller at its general office in Birmingham, Alabama.
- 2. Terms of payment as shown on the face hereof are subject to approval of Seller's Credit Manager.
- 3. Should the financial responsibility of Buyer at any time become unsatisfactory to Seller, Seller shall have the right to suspend performance of any order or require payment for any shipment hereunder in advance or require satisfactory security or other adequate assurance satisfactory to Seller. If Buyer fails to make payment in accordance with the terms of this agreement or fails to comply with any provision hereof, the Seller may at its option in addition to any other remedies, cancel any unshipped portion of this order, Buyer to remain liable for all unpaid accounts. In the event Buyer fails to make payment in accordance with the terms of this agreement, the account shall be deemed to be delinquent and a service charge of one and one-half percent (1 1/2%) per month or 18% per annum, charged weekly will be made on the unpaid balance. Where the annual rate of 18% exceeds the maximum allowed by law, the charge shall be the maximum allowed. Buyer agrees to pay all collection costs and expenses, including reasonable attorneys' fees, incurred by Seller in collecting or attempting to collect such account. Seller shall have the right to credit toward the payment of any monies that may become due Seller hereunder any sums which may now or hereafter be owed to Buyer by Seller.
- 4. If there is a delay in completion of manufacture or shipment of this order due to any change requested by the Buyer or as a result of any delay on Buyer's part in furnishing information required for completion of the order, the price and delivery terms agreed upon at the time of acceptance of the order is subject to change. Prices are F.O.B. factory except as otherwise noted on the face of the sales order contract. Unless otherwise provided in writing, freight charges on all shipments, and spotting, switching, demurrage, or drayage at destination are to be paid by Buyer. Any increase in the amount of freight from that shown on the face hereof as being included is for Buyer's account. Seller reserves the right to designate origin and intermediate carriers. If a specific delivering carrier is required, Buyer must designate such carrier in writing to Seller prior to shipment. Seller reserves the right to make partial shipments.
- 5. Prices do not include any present or future federal, state or local taxes based upon or measured by the sale, use, manufacture or shipment of the products covered hereby. All such taxes shall be for Buyer's account, and, if paid by Seller, the Buyer agrees to reimburse Seller on demand for the full amount thereof.
- 6. Title to products sold shall pass upon delivery to carrier at the point of shipment, irrespective of any freight allowance or prepayment of freight, and thereafter risk of loss or damage shall be upon Buyer.
- 7. Specifications and instructions on the face hereof are in accordance with directions of Buyer and full responsibility for their correctness is assumed by Buyer.
- 8. SELLER WARRANTS THAT THE PRODUCTS COVERED HEREBY CONFORM TO THE DESCRIPTION AND SPECIFICATIONS, IF ANY, ON THE FACE HEREOF, AND ARE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP, FOR A PERIOD OF ONE (1) YEAR FROM THE DATE THE PRODUCTS ARE FIRST SHIPPED. SELLER SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES DIRECTLY OR INDIRECTLY ARISING OR RESULTING FROM THE BREACH OF ANY OF THE TERMS HEREOF OR FROM THE SALE, HANDLING OR USE OF THE PRODUCTS SOLD. SELLER'S SOLE LIABILITY (AND BUYER'S EXCLUSIVE REMEDY) HEREUNDER, EITHER FOR BREACH OF WARRANTY OR FOR NEGLIGENCE, IS EXPRESSLY LIMITED AT THE OPTION OF SELLER: (A) TO THE REPLACEMENT AT THE AGREED POINT OF DELIVERY OF ANY PRODUCTS FOUND TO BE DEFECTIVE OR NOT TO CONFORM TO THE DESCRIPTION AND SPECIFICATIONS SET FORTH-HEREIN, (B) TO THE REPAIR OF SUCH PRODUCTS, (C) TO THE REFUND OR CREDITING TO BUYER OF THE PRICE OF SUCH PRODUCTS, OR (D) AS TO MOTORS, CONTROLS OR ACCESSORY EQUIPMENT PURCHASED BY SELLER FROM OTHERS, AND USED OR INCORPORATED IN SELLER'S PRODUCTS, TO THE SAME EXTENT THAT THE LIABILITY OF SUCH SUPPLIER(S), IS LIMITED AS TO SELLER. ANYTHING CONTAINED HEREIN TO THE CONTRARY NOTWITHSTANDING, SELLER'S WARRANTIES SHALL NOT APPLY TO ANY PRODUCT SOLD HEREUNDER IF BUYER ALTERS SUCH PRODUCT OR REPLACES ANY PART OR PARTS OF SUCH PRODUCT WITH ANY PART OR PARTS NOT MANUFACTURED, SOLD OR OFFERED FOR SALE BY SELLER. No representation or warranty, express or implied, made by any sales representative or other agent or representative of the Seller which is not specifically set forth herein shall be binding upon the Seller. In the event the material to be furnished hereunder is claimed to be defective, the Seller shall be given ample opportunity for inspection or, upon request, be furnished with a sample.
- 9. No products may be returned for credit and no order may be cancelled or changed in whole or in part without the prior written consent of Seller. Shipment of products cannot be extended beyond the original shipping date specified without Seller's consent.
- 10. No contract is subject to cancellation or to change unless agreed to in writing by an authorized representative of Seller. In the event of any cancellation, and without limitation to other available remedies to Seller, the Buyer shall pay Seller within thirty (30) days of such cancellation the contract price; including applicable taxes, for all articles, materials and services which have been completed prior to cancellation. Additionally, Buyer shall pay Seller within thirty (30) days of such cancellation all cost and other expenses incurred by Seller for uncompleted items (including without limitation all commitments to Buyer's suppliers, subcontractors, and others) and a cancellation charge in an amount equal to twenty percent (20%) upon the total of the foregoing. In the event of any change, Seller shall be entitled to revise its prices and delivery schedules to reflect such change.
- 11. Seller shall not be liable for any failure or delay in manufacture, shipment or delivery of products resulting from any cause beyond Seller's control, including, but not limited to, provisions of law or governmental regulations, accident, explosion, fire, windstorm, flood or other casualty, or acts of God, strike, lockout, or other labor difficulty, riot, war, terrorism, insurrection, shortage or inability to secure labor, raw materials, production or transportation facilities. Shipping dates are approximate and are based on factory conditions at the time of quotation. Seller shall not be liable for failure or delay in performance due to prior sale of products.
  - 12. Buyer may not assign this agreement without Seller's prior written consent.
- 13. Buyer agrees to accept delivery of any part or all of the products on the mutually agreed upon delivery date, and failure of the Buyer to furnish Seller with shipping instructions shall in no way alter the terms of payment of Seller's invoice for any of the products offered for delivery. Any deferred delivery request by Buyer shall be subject to Seller's written approval. On any approved deferred delivery Seller shall have the right to render invoice for the completed portion of the order and to warehouse all completed products at Buyer's expense and risk of loss. Furthermore, on the uncompleted portion of the order, Seller reserves the right at its option to either make a cancellation charge on the same conditions and terms of payment as outlined in section 10 hereof or to revise its prices and delivery schedules on the uncompleted portion to reflect its increased costs, delays and expenses.
- 14. Waiver of any term or provision of this agreement or of any breach of this agreement shall not be construed as a waiver of any other term or provision or of any other breach, nor shall any such waiver be deemed or construed as a continuing waiver. Any provision of this agreement prohibited by applicable law shall be ineffective to the extent of such prohibition without invalidating the remaining provisions hereof.
  - 15. This agreement shall be governed under and according to the laws of the State of Alabama.
- 16. In the event of a conflict between any of the printed provisions hereof and any written or typed provisions hereof, the written or typed provisions shall govern.
- 17. There are no terms, conditions, understandings or agreements between Buyer and Seller other than those stated herein and all prior proposals and negotiations are merged herein. NO TERMS AND CONDITIONS IN ANY WAY ALTERING OR MODIFYING THE PROVISIONS HEREOF SHALL BE BINDING UPON SELLER UNLESS IN WRITING AND SIGNED BY AN AUTHORIZED REPRESENTATIVE OF SELLER. NO MODIFICATION OR ALTERATION OF ANY PROVISION HEREOF SHALL RESULT FROM SELLER'S ACKNOWLEDGEMENT OF BUYER'S PURCHASE ORDER, SHIPMENT OF MATERIAL OR OTHER AFFIRMATION ACTION BY SELLER TOWARD PERFORMANCE HEREUNDER FOLLOWING RECEIPT OF BUYER'S PURCHASE ORDER, SHIPPING ORDER, OR OTHER FORMS CONTAINING PROVISIONS, TERMS OR CONDITIONS IN ADDITION TO OR IN CONFLICT OR INCONSISTENT WITH THE PROVISIONS HEREOF.

Budget Martin County, FL Bid 6/23/06

#### Specifications:

<u>Pipe:</u> (Main Line Size) 72" steel pipe shall be manufactured and tested in accordance with AWWA C200 from materials conforming to ASTM A139 Grade C.

24" through 60" steel pipe shall be manufactured and tested in accordance with AWWA C200 from materials conforming to ASTM A139 or A36.

14" through 20" steel pipe shall be manufactured and tested in accordance with AWWA C200 from materials conforming to ASTM A53 Grade B.

12" and smaller steel pipe shall be manufactured and tested in accordance with AWWA C200 from materials conforming to ASTM A53 Grade B.

Pipe Joints: Standard pipe shall be furnished with lap weld joints.

Flanges: Flanges shall be in accordance with AWWA C207, Class D.

<u>Pipe Lengths:</u> Standard Lengths are as noted on quote. The approximate weight of 72" x 0.309" wall pipe is 387 lbs./LF The approximate weight of 42" x 0.188" wall pipe is 172 lbs./LF The approximate weight of 24" x 0.188" wall pipe is 51.0 lbs./LF

Fittings: Fittings shall be manufactured in accordance with AWWA C208 and M11.

<u>Linings:</u> 72" and 42" pipe will be supplied with cement mortar lining in accordance with AWWA C205. 24" pipe will be supplied with epoxy lining in accordance with AWWA C210.

Coatings: 72" and 42" pipe will be coated and wrapped outside with 80 mils cold applied tape in accordance with AWWA C214. 72" and 42" Pipe Specials and Fittings shall be coated and wrapped with 70 mils of tape in accordance with AWWA C209. 24" Pipe to be coated with 2-4 mils Tnemec (or equal) primer.

#### Items not normally furnished by American SpiralWeld Pipe Company:

- Outside independent laboratory inspection.
- Joint material for flanged joints (standard, tapped, or insulation) except as noted.
- Link seals or wall sleeves for link seals.
- · Threaded rodding, friction clamps, or joint harnesses.
- Cathodic protection material, i.e. cadweld material, cables, test stations or insulating kits.
- Stainless, bronze or other specialty bolting material.
- Plastic plugs or other types of protection in tapped holes or protection devices for flange faces.
- Bulkheads, blind flanges, caps or other items required for field hydrotesting.
- Supports.
- Installation.
- Field Supervision.
- Cement Mortar for Patching of the Joints
- · Any item not listed above.

# AMERICAN SpiralWeld Pipe Company, LLC

Orlando District Sales Office

Phone:

407-660-8786

2301 Maitland Center Parkway, Suite 430

Fax:

407-660-1851

Maitland, FL 32751

Project #: Project Name: Budget

Stormwater from Canal C-44

Location:

Martin County, FL

Bid Date:

06/23/2006

Revision:

**QUOTATION** 

Quote Total:

\$738,647.11

			• •	
Quantity	<u>UOM</u>	<u>Description</u>	<u>Unit Price</u>	Total Price \$
72" Pump Disc	harge (per	E mail dated 6/16/06)		
1216	LF	72" I.D. X 0.309" Steel Pipe, CML x Tape, Lap Weld (Standard) Joints, 50' nom. Lengths Pricing Includes:	\$529,60	\$643,993.60
4 4 16 4	EA EA EA	72" Flange (Class D) 4" X 0.237" X Flange (Class D) Outlet on 72" Pipe 72" X 0 ° - 22.5 ° 2 Piece Bend 72" DOL FxF Coupling		
		33 EA Estimated Field Welded Joints (By Others)(±5%)		
42" Material (pe	er <u>E mail</u> da	ated 6/17/06)		
160	LF	42" I.D. X 0.188" Steel Pipe, CML x Tape, Lap Weld (Standard) Joints, 40' nom. Lengths Pricing Includes:	\$394.54	\$63,126.40
3 3	EA EA	42" Flange (Class D) 42" Thrust Collar		
		7 EA Estimated Field Welded Joints (By Others)(±5%)		
24" Material (pe	er E mail da	ated 6/17/06)		•
1	LS	24" Materials, Epoxy x Primer Pricing Includes:	\$31,527.11	\$31,527.11
3 6 3	EA EA EA	24" X 0.1875" X 2' X Flange (Class D) X Plain End Rolled Short 24" X 0.1875" X 8' X Flange (Class D) X Plain End Rolled Short 24" X 0.1875" X 11' X 67.5 ° - 90 ° 5 Piece Bend		

9 EA Estimated Field Welded Joints (By Others)(±5%)





# DURA-STRESS Inc.

POST OFFICE BOX 480779 **I L**EESBURG, FLORIDA 34745-0778

7671

Fax #

Post-it® Fax Note

June 29, 2006

DS06-138

HDR

128 S. Tryon St. Suite 1400 Charlotte, NC 28202-5001 Phone: (704) 338-6772 Fax: (704) 338-6760

rax: Attn: Richard Glassen

RE:

C-44 Reservoir Project

Martin County

Dear Richard,

Please find enclosed our Scope and Proposal for the above referenced project. Dura-Stress, Inc. (Seller) shall furnish to General Contractor (Buyer) all the materials and services outlined in this Proposal for the Contract price of:

Phone #

Fax #

FIVE HUNDRED FIVE THOUSAND THREE HUNDRED FIFTY SIX DOLLARS AND NO/100 \$505,356.00

The prices quoted above are based upon the materials and services described more particularly in the scope and proposal attached to this letter. The above contract price is based only on the specific materials and services that are stated on the attached sheets and does not include any materials or services which seller has excluded from its bid. Additionally, the contract price shall not include extra costs incurred by the seller and charged to Buyer for storage of materials, tack of jobsite access, bid bond, performance and payment bonds, broad form hold harmless insurance, buyers postponement of delivery, and delivery other than during Seller's normal working hours. In no event shall Seller be liable for any liquidated damages, penalties, lost profits, special incidental or consequential damages.

In the event that you have any questions about the scope of materials and services included within the price stated above or if you interpret the scope of the precast concrete work for this project in a manner that is different than the scope reflected on the attached sheets, please schedule a scope meeting with me to discuss the issues. Otherwise, this Proposal is made on this day, June 29, 2006, and the price quoted above will be valid for fifteen (15) days from the date entered.

Should you have any questions after review, please do not hesitate to call me.

Sincerely Yours, Dura-Stress, inc.

Charlie Baker

Sales Représentative

Enclosure

Cc: Glen Switzer Sales Manager 9 JUN. 29. 20064 3:02PM 3527 HDR ENGINEERING INC. -Stress Estimating

gle 002 NO. 3440

Project Name:

C-44 Reservoir Project - Martin County

Quote Number:

DS06-136

Thursday, June 29, 2006

The work covered by this proposal is based solely upon the following documents:

Drawings and Date: Preliminary Drawings Date: April 3, 2006

Architect:

**HDR** 

Specifications:

None

#### GENERAL SCOPE:

Dura-Stress, Inc. proposes to prepare engineering calculations, shop drawings, fabricate, transport, and erect precast concrete based on the above drawings.

#### **JOB SPECIFIC NOTES:**

1) Please note that this job is based on Type IV Construction using a 1-hour fire rating.

2) A mutually agreeable schedule must be established which is compatible with our existing work commitments and availability of raw materials. Our manufacturing facility is scheduled on a first come first serve basis.

3) Dura-Stress, Inc. reserves the right to adjust the price after reviewing updated details

# SELLER HAS INCLUDED IN ITS BID THE FOLLOWING:

BASE BID

10' x 28" Double Tees 12" Precast Wall Panels

±5,104 SF Plenum =

1) Preparation of signed and sealed shop drawings and design calculations.

- 2) Installation of materials, including grouting, bracing and field welding of precast structural connections.
- 3) Embeds in precast and loose hardware to connect precast units where required.

4) Bearing pads and shim stock.

- 5) Precast concrete wall foundation connection plates. Foundation plates shall be delivered Freight on Board (F.O.B.) Jobsite only, to be installed by others.
- 6) Grouting under wall panels.
- 7) Seller has figured an Open Shop erection.
- 8) Field patching of handling hardware that is permanently exposed to view or the elements.

9) Repair of precast units damaged by our normal delivery and erection activities.

10) Standard in-house testing in accordance with Precast Concrete institute (PCI) specifications.

11) Dura-Stress, Inc. standard one (1) year warranty from date of manufacture.

12) All concrete shall be gray in color with local aggregates and of standard weight. Finishes are as follows: Double Tees......Form Finish (Back) and Float Finish (Top) Wall Panels ...... Form Finish (Back and sides) and Smooth Finish (Face)

13) All material is fabricated by hand from natural materials. Color and texture may vary from approved

samples. 14) State and local taxes.

# SELLER HAS EXCLUDED FROM IT'S BID THE FOLLOWING:

1) Backer rod and caulking of the precast joints, caulking, sealing or waterproofing,

- 2) Accessories for other trades, embedded in precast or otherwise, shall be the responsibility of others (i.e. hangers, plates or inserts, etc.).
- 3) Seller has not figured any blockouts, in roof only blockouts for doors and louvers in wall panels. penetrations, or openings for other trades. However, Seller can be contracted to provide blockouts for an additional cost.

4) Seller has not figured any doors or windows or their respective frames.

- 5) Seller has not figured any of the miscellaneous rebar for masonry, steel, or cast in place (c.i.p.) connections. These shall be furnished and installed by others,
- 6) Flashing materials.
- 7) Fire resistance of connections or joints.
- 8) UL Label on products,
- 9) Final cleaning or preparation of precast for coatings.
- 10) Protection of precast after erection.
- 11) Waterproofing.

NO. 3440 P. 3<sup>22</sup>

Project Name:

C-44 Reservoir Project - Martin County

Quote Number: DS06-

DS06-136

Thursday, June 29, 2006

- 12) Buyer shall provide protection at openings or other unprotected structural areas.
- 13) Cost of inspections or accommodations for such by others.
- 14) Independent testing services.
- 15) Traffic and/or pedestrian control.
- 16) Repair of damage to precast by others after erection.
- 17) Installation, reinstallation, repair or maintenance of safety equipment or safety cables.
- 18) All field dimensioning.
- 19) All dewatering.
- 20) Control lines for erection of precast.
- 21) Building permits or fees.
- 22) Signage or graphics.
- 23) Poured concrete at site including: foundations and toppings.
- 24) Field painting, rubbing, sweeping or cleaning of precast. This shall be the responsibility of Buyer.
- 25) Buyer shall provide any moving of power lines to provide access and comply with all government regulations.
- 26) All drains and drainage systems.
- 27) Mechanical, electrical, plumbing, and security.

#### STRUCTURAL NOTES:

- Seller does not assume responsibility for the design or structural integrity of any products other than those furnished by Seller.
- Openings may have to be relocated and/or reduced in size in order to maintain the structural integrity of the precast.
- 3) Units designed for horizontal use have an inherent camber. This should be addressed for roof drainage.
- 4) The designed drainage of this structure shall not be the responsibility of "Dura-Stress, Inc.".
- 5) All embedded steel shall be ASTM A-36 Black. Permanently exposed hardware shall be galvanized.
- 6) The proper placement and alignment of all field-embedded connections shall be the sole responsibility of the Buyer. Buyer shall also be solely responsible for the layout of all building lines and the setting of proper elevations required by Seller.
- 7) Footings must be clean and ready to receive precast material for full time erection.
- 8) Dura-Stress, inc. commencement of its work, preceded by a reasonable inspection of supporting and/or contiguous work shall not constitute a waiver of Buyers obligation to construct its work in accordance with tolerances and quality levels specified in the Contract Documents. Neither Seller nor its subcontractors shall be responsible or liable in any way for errors and omissions in the work of others, including the Contract Documents. Seller agrees to make a reasonable effort to coordinate its work with the work of other trades and report any deficiencies it finds as part of performing it's work. Neither Seller nor it's subcontractors shall be responsible or liable in any way for reviewing, reporting, verifying, analyzing, or evaluating the work of others, including the Contract Documents.

#### **DELIVERY AND ERECTION NOTES:**

- Delivery and erection shall be one (1) phase and continuous. Additional phases will be at the erector's charge plus Sellers overhead and profit.
- 2) Erection is based on OSHA & PCI approved leading edge standards.
- Please note due to the shortage of concrete and steel, delivery dates might be affected at no expense to Dura-Stress, Inc.
- 4) Seller requires reasonably flat access to the jobsite up to and around the footprint (35'-0" minimum) with sultable bearing for needed heavy equipment and product delivery, each operating under its own power. Such access shall include all access to all parts of the work during construction as needed by Seller.
- 5) Seller requires a staging area for 6-8 trailers within one mile of the jobsite at no cost to seller.
- 6) Seller will not be held responsible for damage to streets, curbs sidewalks, trees, grass, shrubbery, underground utilities, etc. in positioning equipment for erection.
- Buyer shall furnish Seller convenient space and utilities for the placement of Seller's construction office trailer at Jobsite.
- B) Seller agrees to exercise reasonable care in proteoting the existing construction and improvements from damage during the performance of its work. Protection of Seller's work once installed on the structure is excluded. Furthermore, the risk of loss of Seller passes to the owner and/or Buyer once installed on the structure, but only to the extent such loss or damage is not caused by acts or omissions of Seller. Seller is not responsible for the repair of damage to its work caused by others.

NO. 3440

Project Name:

C-44 Reservoir Project - Martin County

Quote Number:

DS06-136

Thursday, June 29, 2006

#### **GENERAL NOTES:**

Dura-Stress, Inc. (Seller) is a PCI Certified Plant,

- 2) All materials shall be manufactured in accordance with PCI Quality Control Manual MNL-116, 117 and
- 3) Seller will use PCI certified "in-house" quality control facility. All outside testing will be paid by others.
- 4) A mutually agreeable schedule must be established, which is compatible with our existing work commitments and availability of raw materials. Our manufacturing facility is scheduled on a first come first serve basis.
- 5) Seller shall not be responsible for dated drawings or specifications different than those listed at the beginning of this scope.
- 6) Seller reserves the right to amend this Proposal after a review of any and all revised contract documents even after award of contract. This also includes any information transmitted verbally to Seller from Buyer during any phase before or after award of contract.
- 7) Shop drawings are developed from the contract drawings. Any deviations from these drawings are to be supplied in writing to the Seller or so noted on the approved shop drawings.
- 8) Seller reserves the right to amend proposal due to rise in cost of raw materials to seller.

#### **TERMS AND CONDITIONS:**

- 1) Notwithstanding anything to the contrary in the invitation to bid or in any of the bid documents (hereinafter referred to as the "Bld Package") in response to which this scope and proposal has been submitted, and in the event that Buyer notifies Seller that Buyer intends to accept Seller's proposal for the subject project, Seller reserves the right to negotiate any and all terms and conditions of the subcontract agreement between Seller and Buyer, even if a proposed subcontract agreement has been included in the Bid packages, and even if the Bid Package states that the execution of the subcontract agreement in the form included in the Bid Package is mandatory. This scope and proposal shall become effective as a contract when executed by Selier and Buyers. Alternatively, If this scope and proposal is not executed by Seller and Buyer, all of the obligations of Seller pursuant to this scope and proposal shall be conditioned upon the execution by Seller and Buyer of a contract that contains terms and conditions reasonably acceptable to Seller.
- 2) Payment will be made for the value of the shop drawing services as they are performed. Payment will be made for finished product as it is produced and stored at our facility regardless of an existing signed
- 3) Notice to owner will be filed on all projects. Through this action, Dura-Stress, Inc. reserves its lien rights,
- 4) Seller has not considered the cost for a Performance and/or Labor and Material Bond for this project. If required, the cost to supply required bond shall be added to contract price furnished to Buyer pursuant to this scope and proposal. Additionally, if Seller is required to furnish either or both of such bonds on the project, the subcontract between Seller and Buyer will require that the payment on each invoice issued by Seller to buyer in connection with the project shall be made by Buyer to seller within thirty (30) days from the date of invoice.
- 5) In the event Seller is delayed by or has any other claim for damaged and/or an extension of time caused by Buyer or other subcontractors, Seller will negotiate its compensation and/or extension of time with Buyer. An extension of time may not be Seller's sole remedy for such delays. Seller may, but shall not be required to make up time for delays not directly caused by Seller (Including but not limited to delays cause by inclement weather, acts of God, strikes, unavailability or shortages of material and any government actions which can affect Seller's ability to perform according to the terms of this agreement).
- 6) Buyer and Seller shall mutually agree upon all project schedules for the work (including schedules for submittals) and any revisions thereto. Seller agrees to use every means available to comply with Buyers reasonable schedule revisions for compensation, if any, mutually agreed upon by Buyer and Seller. If Seller cannot comply, Seller shall not be penalized in any way for its noncompliance.
- 7) All pay documentation request forms will be furnished prior to first invoice period.
- 8) Buyer shall be involced monthly for the above values. Payment is due Net 30 days from the date of involce. All payments are due and payable regardless of when Buyer receives his payment. Overdue invoice amount shall bear interest at the rate of 1% per month.
- 9) Once this proposal has been accepted and/or a job number assigned, any early termination will result in a cancellation charge.
- 10) in the event it is necessary for the Seller to place this contract in the hands of an attorney for the enforcement of any of the Seller's rights, including the collection of the contract price or any portion

JUN. 29. 20064 3:02PM 3527 HDR ENGINEERING INC. 1-31Fess Estimating

NO. 3440 P. 5

Project Name:

C-44 Reservoir Project - Martin County

Quote Number:

DS06-136

Thursday, June 29, 2006

thereof from the Buyer, the Buyer shall be responsible for all of Seller's expenses incurred, including Seller's expenses incurred in the filing of a lien or bond claim, court costs and a reasonable attorney's free.

11) Seller's lien rights will not have to be walved in advance of receiving payment,

12) Notwithstanding anything to the contrary in the Bid Package in response to which this scope and proposal has been submitted, the contract between Seller and Buyer for the subject project shall not include any provision for the assessment of Liquidated damages by Buyer against Seller.

13) Seller will accept no back charges without prior written authorization.

REVIEWED AND AGREED TO BY	<u>':</u>
---------------------------	-----------

Company Name	
Company Representative and Title (P	rinted)
Signature	Date

#### Glassen, Richard

From:

John Schoeneck [john@jehillprecast.com]

Sent:

Thursday, June 22, 2006 5:09 PM

To:

Glassen, Richard

Importance: High

#### Richard,

A.  $8' \times 8' \times 8' - 10"$  with single door with lock set, 1 double tub light, 4 duplex GFI outlets, 100 amp panel equipped with 60 amps \$8,480

B. 12' x 20' x 8'-10" with two single door with lock set, lights, 4 duplex GFI outlets, 100 amp panel equipped with 60 amps \$25,400

- 1. One ton HVAC \$1,400
- 2. Freight and Crane prices seperatly.
- 3. Other electrical components ie. disconnects to be priced if required for final quute.
- 4. Gererator room fan could be replaced with louvered vent or vents in the door.

Richard, I would love to spend some more time to develop this with you. If you get any spec's it would help and more detail electrical.

Please let me know how I may be of further service to you.

Respectfully,

John Schoeneck

O) 352.787.5897 or 800.359.5897

C) 352.504.6752

john@jehillprecast.com

C SCHNOBOL - TOM ANDERSON - SAND SCHNOBOL - TOM ANDERSON - SOUND INCHORAL WAREN - 3774 53052/4 PREMIENT - 22EA - # 75,000 M Woden

TREMIE ANCHONS - 12000 #364,000 4126/56

FILTER SAND- GNERETE-FAX - 237-489-4094-

A CONTRACTOR OF THE CONTRACTOR

SALC



# Horing Water Industries

#### Manuladuras

"Moving Water Worldwide"

split In one

HI+C 324-10-12 WS

June 20, 2006

Ref: C-44 Temporary Pumping Equipment to Purchase

Mr. Richard Glassen HDR

We offer the following MWI Pumping Equipment for your review.

# A) MWI Hydraulic Pumps with Diesel Skid Drive Units

- Two (2) MWI HAC324 Angle Hydraulic Pumps rated @ 18,000 GPM @ 20.0' TDH
- Two (2) MWI Diesel Skid Hydraulic Drive Units rated @ 190 HP
- 220' of 24" Discharge Pipe
- Four (4) 24" x 45 Degree Elbows
- Two (2) 24" x 90 Degree Elbows
- Two (2) 24" Flap Gates
- Two (2) 24" Butterfly Valves
- Freight allowed to the jobsite with contractor to off load
- Start up and training one day
- Fuel usage each, 10.6 gals/hr

Budget Price: \$245,000.00

Additional price for 25' TDH (235HP required): \$60,000.00 - \$305,000

- Fuel usage each, 12.3 gals/hr
- Two (2) MWI HAC324 Angle Hydraulic Pumps rated @ 18,000 GPM @ 15.0' TDH
- Two (2) MWI Diesel Skid Hydraulic Drive Units rated @ 140 HP
- 150' of 24" Discharge Pipe
- Four (4) 24" x 45 Degree Elbows
- Four (4) 24" x 90 Degree Elbows
- Two (2) 24" Flap Gates
- Two (2) 24" Butterfly Valves
- Freight allowed to the jobsite with contractor to off load
- Start up and training one day

Page 1 of 4

# **MWI** Corporation

201 North Federal Highway, Second Floor, Deerfield Beach, Florida USA 33441 Phone (954) 426-1500 • Engineering/Sales Office Fax (954) 426-1582

Co.



• Fuel usage each, 8.7 gals/hr

## Budget Price: \$230,000.00

- One (1) MWI HAC324 Angle Hydraulic Pump rated @ 12,000 GPM @ 10.0' TDH
- One (1) MWI Diesel Skid Hydraulic Drive Unit rated @ 65 HP
- 110' of 24" Discharge Pipe
- Four (4) x 45 Degree Elbows
- One (1) 24" Flap Gate
- One (1) 24" Butterfly Valve
- Freight allowed to the jobsite with contractor to off load
- Start up and training one day
- Fuel usage each, 4.8 gals/hr

## Budget Price: \$120,000.00

# B) MWI Vertical Line Shaft Pumps in Vertical Pump Cans

- Three (3) MWI Vertical Line Shaft Pumps Model NW324 rated @ 12,000 GPM
- Three (3) Vertical Pump Cans
- 180' of 42" suction pipe (60 each pump) complete with flange connections
- Three (3) 90 degree 24" discharge elbows (into the distribution box)
- 45' of 24" horizontal pump discharge pipe (15' each pump)
- Three (3) right angle gear reducers
- Three (3) drive shafts
- Three (3) drive shaft guards
- Three (3) diesel engines (100 HP)
- Freight allowed to the jobsite contractor to off load
- Start up training one day
- Fuels usage each, 2.3 gals/hr

# Budget Price: \$350,000.00

# Option:

• Full size witness flow testing by a professional engineer registered in the State of Florida and full time employed by MWI.

Page 2 of 4

# **MWI Corporation**

201 North Federal Highway, Second Floor, Deerfield Beach, Florida USA 33441 Phone (954) 426-1500 • Engineering/Sales Office Fax (954) 426-1582

# Price: \$4,000.00 Each Pump

#### Rental Pricing:

- Two (2) 18,000 GPM Hydraflo Pumps @ 15' TDH
- 150' of 24" discharge pipe
- Four (4) 90 degree elbows
- Four (4) 45 degree elbows
- Two (2) 24" flap gates
- Two 92) 24" butterfly valves

## Price Pr Month: \$20,000.00

- One (1) 12,000 GPM Hydraulic Pump @ 10' TDH
- 110' of 24" discharge pipe
- Four(4) 45 degree elbows
- One (1) 24" flap gate
- One (1) 24" butterfly valve

# Price Pr Month: 9,000.00

Standard Rebuild of MWI HAC324. (rebuild does not include structural damage requiring replacement pump components such as intakes or impellers etc.)

# Price: \$15,000.00 ea

#### Not Included:

- Applicable Taxes
- Installation
- Misc. fasteners, brackets etc required for installation at the jobsite the installing contractor would normally supply
- Automatic pump controls

If you have any questions please feel free to contact me at any time.

#### Page 3 of 4

# **MWI** Corporation

201 North Federal Highway, Second Floor, Deerfield Beach, Florida USA 33441 Phone (954) 426-1500 • Engineering/Sales Office Fax (954) 426-1582

Sincerely,

Dennis Whittaker
MWI Sales Engineer

Dennisw@mwicorp.com
Cell 772 321 3755 Fax 954 426 1582
Corporate 954 426 1500 x 128

Page 4 of 4

# **MWI Corporation**

201 North Federal Highway, Second Floor, Deerfield Beach, Florida USA 33441 Phone (954) 426-1500 • Engineering/Sales Office Fax (954) 426-1582

# Hydraflo™

# **Pump Specifications**



#### I. GENERAL

The work under this section shall consist of providing all pumping equipment including the hydraulically driven axial flow or mixed flow pumps, drive units, all piping, appurtenances and mechanical system as shown on the drawings and as specified herein. Pumps shall be manufactured by MWI Corporation, 201 N Federal Hwy., Deerfield Beach, FL 33441-3624, or ENGINEER approved equal.

The substitution form enclosed must be returned two (2) weeks prior to bid opening for consideration of approval.

The pump and drive equipment to be furnished under this contract shall be made by a manufacturer regularly engaged in such work, and who has furnished like equipment and specialties for at least five (5) similar installations which have been continuously operating successfully for not less than five (5) years.

Evidence of this experience and data on the equipment and its operation in those installations shall be made available to the ENGINEER at their request to determine whether the equipment and specialties offered meet the requirements of these specifications.

Pump bowls, propellers, and hydraulic power units shall be the product of a single manufacturer.

#### II. DESIGN DATA

The Contractor shall furnish with the bid, guaranteed pump performance curves based on shop tests of pumps in accordance with procedures as specified by Standards of Hydraulic Institute. Curves shall be certified by a professional engineer, registered in the state where the tests are conducted and employed full time by the pump manufacturer. Any bid not including such curves shall be considered non-responsive and shall not be accepted.

1.	Quantity of Pumps	•	
2.	Design Capacity Ea.	GPM	CMS
3.	Datum Elevation	FT	M
4.	Discharge Pipe Invert	FT	M
5.	Suction Bell Inlet	FT	M
6.	Downstream Water Elevation	FT	M
7.	Pump Propeller Elevation	FT	M
8.	Operation Head: Design TDH	FT	M

#### III. WARRANTY

The hydraulic propeller pump system and controls shall be warranted for 1 year by the manufacturer against defects in material and workmanship, under normal use and service from the date of shipment from the factory as described in the warranty certificate.

#### V. DIESEL SKID DRIVE UNIT

Each Hydraflo pump shall be supplied with an individual diesel engine drive unit as shown on the drawings and as specified herein. The drive unit shall be manufactured and tested at the same factory as the pumping unit to provide a single source of responsibility and for the proper coordination of all components of the system. The drive unit shall consist of an oil reservoir, a fixed displacement hydraulic pump, a diesel engine, inter-connecting piping, valves and accessories mounted on a steel base with lifting eyes.

A.	The hydraulic pump shall be a fixed displacement vane type unit capable of continuous operation at 3000 psi and shall produce a minimum output of hp at 1,800 rpm.
В.	The prime mover shall be a or equal diesel engine with a continuous duty rating of BHP at 1,800 rpm. The engine shall be fully equipped and shall include but not be limited to: a radiator, batteries and cable, safety shutdown switches, and exhaust system with a muffler or sound attenuating system.
C.	The diesel drive unit shall be factory assembled and skid mounted. Hydraulic agriculture to the

- C. The diesel drive unit shall be factory assembled and skid-mounted. Hydraulic equipment shall include but not be limited to: a full flow oil filter, adjustable pressure relief valve, pressure and temperature gauges, quick connect couplings and safety shut down controls for low hydraulic oil level, high suction vacuum, high hydraulic oil temperature, low engine oil pressure, and high engine water temperature.
- D. A hydraulic system monitoring device to allow diagnosing hydraulic system behavior even while pump is still submerged shall also be included.
- E. The drive system shall include a "clutch" starting system which allows the prime mover to start unloaded and then gradually (3 to 5 seconds) engage the load. The "clutch" system shall be used to gradually disengage the load prior to shut-off of the prime mover.
- F. Sufficient hydraulic oil cooling capacity shall be provided to sustain direct sunlight radiation as well as ambient temperatures up to 122°F (50°C).

### IX. SUBSTITUTION OF MATERIALS OR EQUIPMENT

The procedure for review by ENGINEER will be as set forth in following paragraphs:

Requests for review of substitute items of material and equipment will not be accepted by ENGINEER from anyone other than CONTRACTOR. If CONTRACTOR wishes to furnish or use a substitute item of material or equipment, CONTRACTOR shall make written application to ENGINEER for acceptance thereof, certifying that the proposed substitute will perform adequately the functions called for by the general design, be similar and of equal substance to that specified and be suited to the same use and capable of performing the same function as that specified. The application will state whether or not acceptance of the substitute for use in the Work will require a change in the Drawings or Specifications to adapt the design to the substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified shall be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by ENGINEER in evaluating the proposed substitute. ENGINEER may require CONTRACTOR to furnish at CONTRACTOR'S expense additional data about the proposed substitute. ENGINEER will be the sole judge of acceptability, and no substitute will be ordered or installed without ENGINEER'S prior written acceptance. OWNER may require CONTRACTOR to furnish at CONTRACTOR'S expense a special performance guarantee or other surety with respect to any substitute.

ENGINEER will record time requirements by ENGINEER and ENGINEER'S consultants in evaluating substitutions proposed by CONTRACTOR and in making changes in the Drawings or Specifications occasioned thereby. Whether or not ENGINEER accepts a proposed substitute, CONTRACTOR shall reimburse OWNER for the charges of ENGINEER and ENGINEER'S consultants for evaluating any proposed substitute.

## XI. PROSPECTIVE BIDDERS SHALL SUBMIT THE FOLLOWING FOR EVALUATION:

Completed Manufacturer's qualification sheet (previous page)

Guaranteed pump performance curves based on shop tests of pumps in accordance with procedures as specified by Standards of Hydraulic Institute. Curves shall be certified by a professional engineer, registered in the state where the tests are conducted and employed full time by the pump manufacturer. Any bid not including such curves shall be considered non-responsive and shall not be accepted.

Certification by Chief Engineer that manufacturer's pump testing facilities meet all requirements of the Hydraulic Institute Standards.

Specific acknowledgment that all testing shall be conducted in accordance with procedures described in the "Hydraulic Institute Standards" USA

A representative list of manufacturer's experience in the furnishing of hydraulically driven axial flow pumps of similar sizes or larger to those specified for this project, permanently installed and presently operating shall be furnished and include the names, addresses and telephone numbers of the consulting engineers, owners and operators of the system. The dates of installations shall also be included.

Three (3) certified copies of the pump performance curve of the unit. The curve shall be stamped as certified (correct) by a Professional Engineer registered in the state in which the pumps are tested and manufactured. The curve shall show the pump capacity, discharge head, speed, and horsepower requirements.

Three original copies of manufacturer's complete engineering catalogues for pumps.

Three certified copies of installation and operation manuals for permanent pump systems.

Three descriptive brochures showing photographs and/or describing the pump unit.

Three copies of all pump "Bill of Materials" of the unit's construction, cut-a-way drawings, and dimensions as offered to confirm compliance with the specifications.

#### V. ELECTRIC SKID DRIVE UNIT

Each Hydraflo pump shall be supplied with an individual electric motor drive unit as shown on the drawings and as specified herein. The drive unit shall be manufactured and tested at the same factory as the pumping unit so as to provide a single source of responsibility and for the proper coordination of all components of the system. The drive unit shall consist of an oil reservoir, a fixed displacement hydraulic pump, an electric motor, interconnecting piping, valves and accessories mounted on a steel base with lifting eyes.

- A. The hydraulic pump shall be a fixed displacement vane type unit capable of continuous operation at 3000 psi and shall produce a minimum output of \_\_\_\_\_ hp at 1,800 rpm.
- B. The prime mover shall be <u>US Electric Motors</u> or equal rated at \_\_\_\_\_ Hp at 1780 rpm. The electric motor shall be a horizontal, foot-mounted, open drip proof, induction squirrel cage type, with self-lubricating ball bearings. The motor shall operate on 460 volt, 3-phase, 60 Hertz electric power and shall be wound for across-the-line starting. Windings shall be completely encapsulated and have a 1.15 service factor.
- C. Power unit shall be factory assembled and skid-mounted. Hydraulic equipment shall include but not be limited to: a full flow oil filter, adjustable pressure relief valves at each pump outlet, pressure and temperature gauges, quick connect couplings and safety shutdown controls for low oil pressure and high oil temperature. All systems shall be assembled, piped and tested prior to delivery to the site.
- D. A hydraulic system monitoring device to allow diagnosing hydraulic system behavior even while pump is still submerged shall also be included.
- E. The drive system shall include a "clutch" starting system which allows the prime mover to start unloaded and then gradually (3 to 5 seconds) engage the load. The "clutch" system shall be used to gradually disengage the load prior to shut-off of the prime mover.
- F. Sufficient hydraulic oil cooling capacity shall be provided to sustain direct sunlight radiation as well as ambient temperatures up to 122°F (50°C).

#### V. DUAL ELECTRIC SKID UNIT

The Hydraflo pumps shall be supplied with a dual electric motor drive unit as shown on the drawings and as specified herein. The drive unit shall be manufactured and tested at the same factory as the pumping unit so as to provide a single source of responsibility and for the proper coordination of all components of the system. The drive unit shall consist of an oil reservoir, a fixed displacement hydraulic pump, an electric motor, interconnecting piping, valves and accessories mounted on a steel base with lifting eyes.

- A. The hydraulic pumps shall be fixed displacement vane type units capable of continuous operation at 3000 psi and shall produce a minimum output of \_\_\_\_\_ hp at 1,800 rpm. Each hydraulic pump shall be directly mounted to separate prime movers.
- B. The electric prime movers shall be <u>US Electric Motors</u> or equal rated at \_\_\_\_\_ Hp at 1780 rpm. The electric motors shall be horizontal, foot-mounted, open drip proof, induction squirrel cage type, with self-lubricating ball bearings. The motor shall operate on 460 volt, 3-phase, 60 Hertz electric power and shall be wound for across-the-line starting. Windings shall be completely encapsulated and have a 1.15 service factor.
- C. Power unit shall be factory assembled and skid-mounted. Hydraulic equipment shall include but not be limited to: a full flow oil filter, adjustable pressure relief valves at each pump outlet, pressure and temperature gauges, quick connect couplings and safety shutdown controls for low oil pressure and high oil temperature. All systems shall be assembled, piped and tested prior to delivery to the site.
- D. A hydraulic system monitoring device to allow diagnosing hydraulic system behavior even while pump is still submerged shall also be included.
- E. The drive system shall include a "clutch" starting system which allows the prime mover to start unloaded and then gradually (3 to 5 seconds) engage the load. The "clutch" system shall be used to gradually disengage the load prior to shut-off of the prime mover.
- F. Sufficient hydraulic oil cooling capacity shall be provided to sustain direct sunlight radiation as well as ambient temperatures up to 122°F (50°C).

### XII. VARIABLE SPEED CONTROLLER

- A. A pump ramp controller shall be installed in the control center and shall control the pumps as shown on the Pumping Sequence Table. The control shall be a 100% solid-state, plug-in module. Each module shall receive a voltage or current signal as supplied from the control system. The ramp controller shall provide adjustable gain, offset, minimum and maximum speed limit adjustments, and differential set points as described below.
  - 1. Adjustable Gain The controller shall allow the 4-20 mA signal output to be continuously positioned over the full output range. The low output limit shall be adjustable from 10% to 100% of the output range. The high output limit shall be adjustable from 100% down to 10% of the output range. The gain, therefore, is used to adjust the slope of the output line.
  - 2. Offset The control card shall have provision to allow adjustment of the 4-20 mA output over any portion of the input range.
  - 3. <u>Minimum and Maximum Speed Limits</u> The control card shall have provisions to allow adjustment of the output signal so that a minimum and maximum speed can be selected and set by the Engineer. The minimum/maximum speed adjustments shall adjust the lowest and highest allowable current supplied by the 4-20 mA (max. range) output signal:
  - 4. <u>Differential Set Points</u> Each ramp control shall be provided with a differential set point that senses the voltage or current input signal and provides an adjustable differential output. The differential control shall be used to turn the pump **ON** and **OFF**.
- B. <u>Variable Speed Pumps Alternation</u> The pumps shall go through a fixed sequence timed alternation to decrease the amount of wear imposed on a single variable speed pump. The alternation shall be adjusted to transpose the pumps operation during the systems low demand hours.

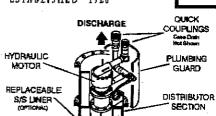


PROPELLER

# Moving Water Industries Committee

# HYDRAFLO WATER PUMP

- SINGLE STAGE -

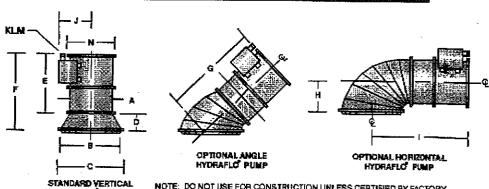


STATIONARY VANES

INTAKE SELL

STRAINER BARS

INTAKE CUTAWAY YIEW OF STANDARD HYDRAFLO PUMP



NOTE: DO NOT USE FOR CONSTRUCTION UNLESS CERTIFIED BY FACTORY.

								PHTS	CAL D	RIA -		•		OPTR	ONAL #	TAKE	(PEOTE 2)	
	-		_								,		41	5°		94	0"	
MODEL	DIAM		OPE	AKE NING ETER B	PATE DIAM	蟹	STAM VERT PLANC FLANCE FLANCE	E TO	PU HOU FLANG	SING SETO Estore;		KE IE TO APOE	HORIZA FLANA FLANA DISCH FLAN	IKE SE TO ARGE WGE	FLAN FLAN HOU CENTE	SING	CENTE CENTE	AKE RUIN RTICA IARGI NGE
	Inch	mm	inch	गास	inch	PF.	Inch	mm	Inch	mm.	änch	IT IT	inch	mich.	Inch	1 1909	lach	(A)
HAC308	8.625	218	12.0	306	17.0	432	6.375	182	20.0	508	26.375	670	29.5	749	<u> </u>	_	<u> </u>	_
HAC312	12.75	324	18.0	457	22.0	558	6.375	162	22.25	565	28,625	727	36.75	B33	11.0	278	3525	895
H#\$12	12.75	324	19.0	457	22.0	559	8.375	152	29.0	737	35.375	699	43.5	1105	11,0	279	42.0	108
HAC318	16.875	429	24.0	610	28.0	711	6.375	213	29.25	748	37.625	956	46.25	1175	17.0	432	49.25	125
HH518	18.875	479	27.0	686	31.0	787	10.375	264	37,5	959	47.875	1218	55.0	1397	18.0	457	58.5	148
HAC920	20,0	508	30.0	782	34.0	864	6,375	213	33.0	838	41,375	1051	52.0	1321	19.5	495	56.5	141
HAC324	25.062	637	36.0	914	39.5	1003	11.0	278	38.0	965	49.0	1245	58.5	1486	21.0	633	62.5	158
HH524	25.062	637	36.0	814	39.5	1003	11.0	279	52.125	1324	63.125	1603	72.625	1845	21.0	533	78.625	
HAC330	30.0	782	45.0	1143	50.0	1270	12.5	318	53.125	1349	65.625	1867	79.625	2022	25.0	835	83,125	
HAC336	37.375	949	54.0	1372	60,125	1527	14.75	375	60,675	1546	75.625	1921	92.875	2359	28.5	724	95.375	
HAC342	43.75	1111	63.0	1600	70.625	1794	14.75	375	60.0	1524	74.75	1699	92.0	2337	32.0	813	99.0	251
HAC380	62.0	1575	90.0	2286	98.0	2489	24.75	828	84.0	2134	108.75	2782	128.75	3218	39.5	1003	135.5	344

HYDRAFLO PUMP

	HOU	SING	HOS DIAM	E CONNECT	NOM IOSE		FLANGI	E AT D	ISCHARK N	€ #юπ	•		ŞTAN	DARD	STANE	ARD
MODEL	TO PUO GW	RLINE MBING VRD	K	L	M CASE	NUMBER	DIAM	SES.	BOLT O	IACLE ETEA	DIAME	ER TER	VOL	UME	WEIC VAN	AP MT
	Inch	(I) (II)	SUPPLY	RETURN	DRAIN	HOLES	inch	gom	inch	शका	Inch	mm	cu.t.	CU. MIR.	Lba.	ίφ.
HAC308	10.0	254	.75	1.0	_	. 8	5625	14.3	10.75	273	12.75	324	4.42	.125	170	. 77
HAC312	120	305	1.0	1.25	.75	12	.5625	14.3	14.675	378	16.0	408	8.02	227	300	136
HH512	120	305	1.25	1.5	.75	12	.5625	14.3	14.875	378	16.0	405	9,91	.28	360	163
HAC316	15.0	381	1.25	1.5	.75	12	.5625	143	19.0	483	20.8125	52 <del>9</del>	17.5	.464	550	249
HH518	18.0	457	1.5	1.5	.75	16	.5625	14.3	20.25	514	22.5	572	28.63	.754	1100	499
HAC320	18.0	483	1.25	1.5	.75	18	5825	14.3	220	559	24,125	813	27,7	.764	925	420
HAC324	22.0	559	1.5	1.5	.75	20	.5825	14.3	26.375	670	28.625	727	44.24	1.25	1500	680
HE1524	22.0	559	1.5-2.0	20	.75	20	.5625	14.3	26.375	670	28.825	727	57.0	1.614	1800	816
HAC330	26.0	850	1.5-5.0	20	.75	24	5825	14.3	32.75	832	34.125	867	95.0	2.7	2200	996
HAC336	30.0	762	1.5-2.0	2.0	.75	28	.75	19.05	40.625	1032	43.125	1095	158.21		3400	1542
HAC342	33.0	B38	1.5-2.0	20	.75	30	.75	19.05	45.6	1156	49.5	1257	215.8	0.1	4000	1614
HAC363	48.0	1219	(2) 2	(2) 2	ÇQ. 16 (1) 1	50	.B1	20.57	63.0	_	<b>≋</b> 8.13	1680	604	17.1	10,000	4536

NOTE 1: Strainer bars (Intake acreen) extend beyond intake itange (variable up to 2 inches). Dimension to intake itange is utilized here as a guide for spacing of opening to sump bottom

NOTE 2: Intake bells are available as 45° s & 90° s as well as the standard vertical unit, (Consult factory for other available intakes.) All intakes can be provided

with a stand to support water pump and ensure minimum inlet water requirements.

NOTE & If there are dimension limitations, consult factory as a shorter dimension may be obtainable.

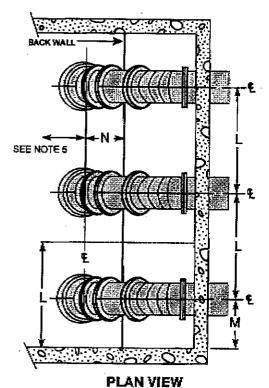
NOTE 4: Optional A.S.A. and A.N.S.I. diameter and drilling flanges are evallable to match customer's existing pipe. Consult factory.

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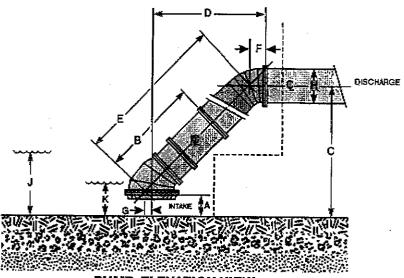


# Moving Water Industries ......



- 1. Dimensions shown are minimum and can be increased as required.
- 2. Dimension shown is based on short radius elbow.
- 3. Strainer bars on intake extend below intake flange opening.
- 4. Depth of sump should always be designed liberally to accommodate possible future decreasing intake water levels and to maximize the potential draw down (there is no maximum submergence).
- 5. Dimension is subject to submergence, inlet channel, etc.

FOR PUMP SUPPORT REFER TO "DIMENSIONS AND DRAWINGS OF INTAKE WITH STAND ARRANGEMENTS,"



#### **PUMP ELEVATION VIEW**

MÇDEL.	CLEARANCE FUMP		CENTERLINE DISCHARGE CF FLANGE DISCHARGE		E INTAKE FLANGE TO HORIZONTAL CENTERLINE OF DISCHARGE		F DISCHARGE FLANGE TO CENTERLINE		G INTAKE BELL CENTERLINE TO 48* PUMP CENTERLINE					
	in.	: mm.	ŝī,	mm	in.	Min	in.	mm	ìn.	4	in.	, mm.	in.	1000
HAC388	8.0	229	29.5	749	32.375	322	24.5	622	33,125	. M1.	3.825	- <b>92</b>	2.5	63
HACSIL	8.0	229	38.75	133	38.75	984	30.5	775	42.0	1007	5.25	133	4.5	114
HHF12	8.0	229	43.5	1106	43.5	105	35.25	875	48.75	1238	5.25	133	4.5	3 110
HACSIE	10.0	254	48.25	1175	47.375	1203	39.25	807	52,875		6.825	158	4.75	121
HHE18	12.0	305	55.0	1597	56.25	1429	47.0	1104	62.5	1588	7.5	[9]	4 625	117
HAC\$20	12.0	305	52.0	1321	54.B25	1387	48.375	1178	80.25	1530	8.25	210	4.5	e inte
HAC32#	16.0	. 457	58.5	1448	86.375	1688	53.73	1385	88.5	1740	10.0	254	4.625	. 117
HH524	18.0	(57	72,625	1845	76,375	1040	63,75	1819	82.625		18.0	254	4.625	1
HAC\$20	18.0	(57	79,625	2022	83.0	2108	71.5	1818	82.0	2137	12.375	314	5.875	140
HACSTE	24.0	810	80.875	2366	95.75	2508	83.5	2121	105,75	26.56	14.876	( are /	0.125	156
HAC342	24.D	610	82.0	2337	111.375		89.0	2251	108,375	2176	17.375	441	5.75	144
HAC\$10	36.0		126,5		143.0	3532	128.25		151.375		24.875	632	5 625	141

NOTE 183 NOTE 1 NOTE I NOTE 1 NOTE 182 NOTE 1

MODEL	H J DISCHARGE MINIMUM WATER PIPE LEVEL FOR DIAMETER PUMP STARTING		K MINIMUM WATER LEVEL FOR PUMP SHUT OFF		L Suggested Minamum		M SUGGESTED MINIMUM PUMP CENTERLINE TO SIDE WALL		N SUGGESTED MAXIMUM PUMP CENTERUNE TO BACK WALL			
<u> </u>	in.	apart.	in.	FIRE,	in.	min.	in.	. mar, .	in.	man	in.	i mm.
HACSON	8.625	210	29.0	504	13.0	330	36.D	. Mt.	18.0	457	14.0	3.50
HACS12	12.75	324	25.0	535	13.D	330	40.0	1915	20.5	568	16.0	106
HHU12	12.75	324	26.0	586	13.9	330	40.0	1016	20.0	508	18.0	406
HACOTE	16.0	406	30.0	782	15.0	381	54.0	1372:	27.0	886	23.0	584
HHUER	18.0	457	34.0	884	18.0	457	58.Q	1473	28.0	727	21.0	010
HAC320	20.0	506	35.0	389	17.0	432.	68.0	(876	33.Q	836	28.0	711
HAC324	24.0	. 510	44.0	1111	24.0	610	80.0	2032	40.0	1018	38.0	114
HH624	24.0	510	41.0	1111	24.0	610	80.0	2032	40.0	1010	36.0	S 014
HAC150	30.0	762	51.0	, 1215	25.0	625	100.0	2540	50,0	1270	46.0	: 1108
HAC236	36.0	<b>\$</b> 14	64.0	1628	32.0	213	114.0	2880	57.0	1448	50.0	1270
HAC242	42.0	1057	68.9	1253	32.0	813 -	132,0	3353	0.85	1578	88.0	1870
HACISE	6D.0	1524	95_Ç	, 2413	48.0	1245	180,8	4572	90.0	2206	90.0	2290
	NO	TE 1	NO	TE 4					00 M	T USE FC	H CONS	TRUCTIO

OO NOT USE FOR CONSTRUCTION LANCESS CERTIFIED BY FACTORS



# Moving Water Industries Corporation

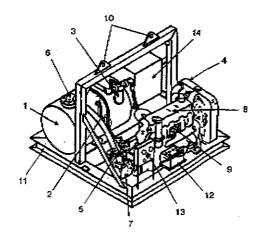
# SINGLE DIESEL DRIVE UNIT

ESTABLISHED 1926

	GENERAL INFORMATION									
MODEL NUMBER	WATER PUMP	HYDRAULIC OIL RESERVOIR	DAY TANK (optional)		CONNEC HOSE IN IN Note 2		DIESEL ENGINE			
TOURDER	Note 1	Capacity in U.S. Gals. / (LTRS)	FUEL DIL U.S. GALS ((LTRS)	SUPPLY	AETUAN	CASE DRAIN	BHP RANGE Note 8			
400 D	HM304	45 (1 <b>70</b> )	25 (94)	.75	1	-	10-25			
500 D	HTT064	45 (170)	25 (94)	.75	1	.75	5-25			
600 D	HT006	45 (170)	25 (94)	1.0	1.25	.75	10-30			
800 D	HAC308	45 (170)	25 (94)	.75	1	.75	10-25			
1200 D	HAC312	110 (416)	25 (94)	1	1.25	.75	20-40			
1300 D	HH512	180 (681)	50 (189)	1.25	1.50	.75	50-75			
1600 D	HAC316	145 <b>(549</b> )	50 (169)	1.25	1.50	.75	30-50			
1800 D	HH518	265 (1 <b>003</b> )	50 (1 <b>69</b> )	1.50	1.50	.75	125			
2000 D	HAC320	180 (681)	50 (189)	1.25	1.50	.75	40-75			
2400 D	HAC324	265 (1003)	50 (189)	1.50	1.50	.75	60-125			
2500 D	HH524	360 (1 <b>363</b> )	50 (189)	1.50-2	2 .	.75	200-250			
3000 D	HAC330	360 (1383)	50 (188)	1.50-2	5	.75	125-250			
3600 D	HAC336	360 (1363)	50 (186)	1.50-2	2	.75	150-250			
4200 D	HAC342	360 (1383)	50 (( <b>89</b> )	1.50-2	2	.75	150-250			
6000 D	HAC360	900 (3406)	75 <b>(283</b> )	(2) 2	(2) 2	(2) .75 (1) 1	400-600			

Notes:

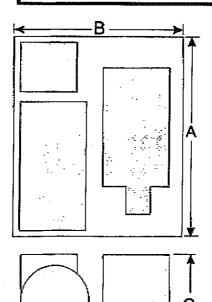
- 1. Last 2 digits in this number are indicative of gump discharge diameter.
- Hose sizes may vary due to length requirements.
- 3. Actual horsepower for prime mover depends upon manufacturer's ratings and pumping requirements (GPM/TDH).



## STANDARD EQUIPMENT

- 1. OIL RESERVOIR / HEAT EXCHANGER
- 2. HYDRAULIC OIL LEVEL SWITCH GAUGE
- 3. RETURN FILTER
- 4. QUICK COUPLERS (NOT SHOWN)
- 5. RELIEF VALVE
- 6. SUCTION STRAINER (BELOW)
- 7. HYDRAULIC PUMP
- 8. DIESEL ENGINE
- 9. ENGINE CONTROLS
- 10. LIFTING EYES (ON SMALL FRAMES ONLY)
- 11. HEAVY DUTY SKID FRAME
- 12. BATTERY
- 13, CONTROL PANEL

  - A SUCTION STRAIGH WILLIAM GALSE B. HYDRAULIC SYSTEM PRESSURE GALGE C. OL TEMPERATION ON MY
- C. OIL TEMPERATURE GAUGE D. FALURE RESET E. SYSTEM LOADING VOLVE
- 14. DAY TANK (OPTIONAL)



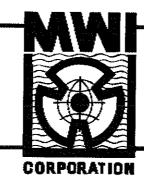
FOR 6000D CONFIGURATION CONSULT WITH **FACTORY** 

	PHY	SICAL	DATA			
MODEL	GENE	RAL DIMENS		WEIGHT	VOLUME	
NUMBER	A	В	C	(M2) MACHENTA	CULFF.	
400D, 500D, 600D,800D	4.66 (1.42)	6.5 (1. <b>98</b> )	4.0 (1.22)	1650 (748)	121 ( <b>3.43</b> )	
1200D	4.66 (1.42)	6.5 (1.98)	4.0 (1.22)	1900 (862)	121 (3.43)	
1 <b>300D</b> , 2000D	7.16 <b>(2.16)</b>	6.5 (1.98)	5.0 (1.52)	3200 (1452)	233 (6.60)	
1600D	6.16 (1.88)	6.5 (1.98)	5.0 (1.52)	2700 (1225)	200 (5.66)	
1800D, 2400D &(3000D)	7.16 <b>(2.18)</b>	7.0 (2.13)	5.5 (1.68)	4600 ( <b>2087</b> )	276 ( <b>7.82</b> )	
2500D, 3000D, 3600D & 4200D	10.0 (3.05)	7.33 (2.23)	6.5 (1.98)	9800 (4445)	476 (13.48)	
6000D	15.0 (4.57)	7.33 (2.23)	7.0 (2.13)	consult factory	770 ( <b>21.7)</b>	

Note: Due to the addition of available options, size of unit may increase. Consult lactory

201 North Federal Hay., Deerfield Beach, Florida 33443 USA

Phone: (954) 426-1500 Fax: (954) 426-1582

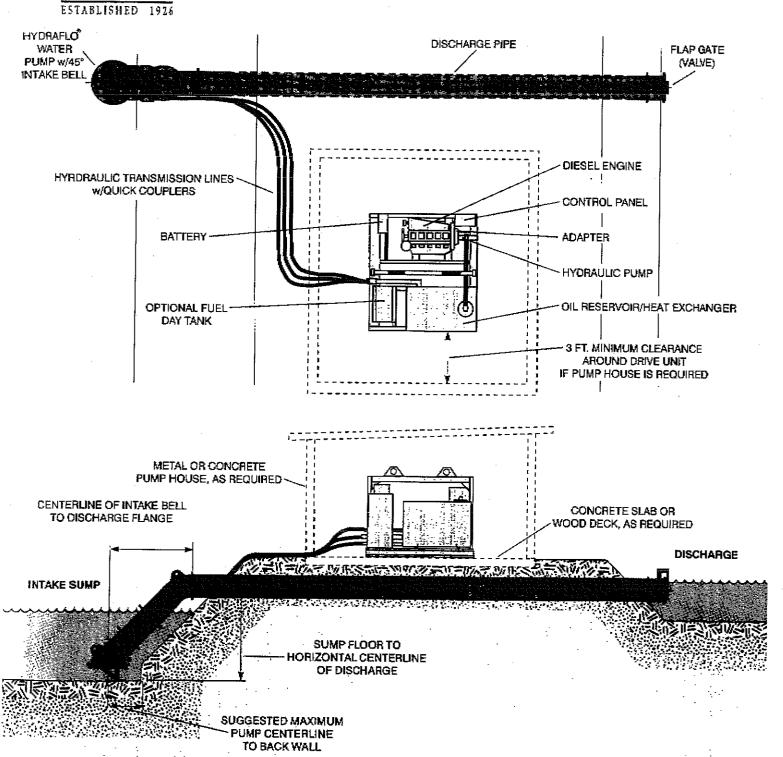


# Moving Water Industries armetic

TYPICAL APPLICATION FOR

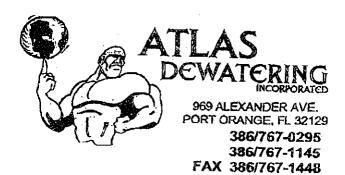
# SINGLE DIESEL DRIVE UNIT

WITH 45 DEGREE HYDRAFLO WATER PUMP



201 North Federal Hwy., Deerfield Beach, Florida 33441 USA

Phone: (954) 426-1500 Fax: (954) 426-1582



## INSTALLATION & RENTAL **QUOTATION AND AGREEMENT**

TODAY'S DATE: June 19, 2006

(QUOTATION VALID FOR 60 DAYS) HDR ENGINEERING INC.

CONTACT NAME: RICHARD GLASSEN

PHONE:

704-338-6700

FAX:

704-973-6879

E-MAIL:

PROJECT NAME: INTAKE CANAL

PROJECT LOCATION: C-44 RESERVOIR

## SCOPE OF WORK/ APPLICATION

Atlas Dewatering will provide the equipment listed on this quotation on a rental basis to the customer. Atlas Dewatering will install this Equipment for the customer, once the installation is complete and unless otherwise noted in this quotation, the Customer is then responsible for the day to day operation and maintenance of the Equipment, including providing for and paying for all fueling/ maintenance requirements and operators necessary to operate and maintain the equipment.

Customer Initial



INSTALLATION OF APPROXIMATELY 36,000 FT. OF SOCK WITH A 1,500 MINIMUM PER TRIP. PRICE PER FOOT IS \$5.15

## THANK YOU FOR YOUR CONSIDERATION

Any agreed upon changes to the Scope of Work must be in writing.

This or any other offer by Atlas Dewatering, Incorporated is made without regard to the general conditions, supplementary or special conditions or clauses, or any other provision of the bid documents or prime contract agreement, whether stated or respressed in Atlas Dewatering's offer document. Scope of Work and Equipment to be Furnished are based solely on the information provided by the Customer.

PAYMENT TERMS ARE NET 30 DAYS FROM THE INVOICE DATE. FINANCE CHARGES, AT THE RATE OF 1.5% MONTHLY, WILL APPLY TO ANY INVOICE NOT PAID WITHIN TERMS.

Customer Initial

Allas laitint E.H.

PRIOR TO OUR DELIVERING EQUIPMENT AND DURING THE WORK ON THE PROJECT, THE CUSTOMER WILL BE RESPONSIBLE FOR THE ITEMS LISTED BELOW AND THEIR RELATED COST. CUSTOMER ALSO AGREES TO THE FOLLOWING TERMS AND CONDITIONS:

## REQUIRED FOR ALL PROJECTS/ CUSTOMER RESPONSIBILITY:

- 1. DELAYS: Atlas intends to perform its work in a continual and uninterrupted manner on a 40 hour per week/ 8-hour per day basis. The Customer is responsible for all reasonable costs and additional charges associated with any delay in Atlas's work to the extent that Atlas has not caused the delay. Customer will grant Atlas a reasonable amount of additional time to complete work delayed by no fault of Atlas.
- 2. LIQUIDATED DAMAGES: The contract price does not include any allowance for liquidated or consequential damages. Atlas will not accept any contract document containing liquidated damage or consequential damage provision.
- 3. INSURANCE: Atlas will provide, at it's own expense, and maintain during the term of the contract it's standard general liability and workman's compensation insurance coverage. A Certificate of Insurance, naming customer as a Certificate Holder, will be furnished upon request. Atlas will be reimbursed for the cost of any additional coverage requesting in excess of its existing policy, including the naming parties as Additional Insured and/or providing a Waiver of Subrogation. Customer agrees to provide insurance coverage for all equipment furnished to the project to protect theft, vandalism, rollover and all other calamities that may occur.
- 4. INDEMNIFICATION: Atlas agrees to indemnify and hold customer harmless from and against any and all causes of action, claims and suits and to indemnify and reimburse Customer for court costs and awarded attorney's foes associated with the defense of any such matter to the extent that Atlas is found to be negligent or at fault with the exception of the terms noted below. Customer agrees to indemnify and hold Atlas harmless from and against any and all causes of action, claims and suits and to indemnify and relimburse atlas for court costs and reasonable attorney fees associated with the defense of any such matter, including (a) those instances that the Customer is found to be negligent or at fault; (b) alleged damages to property resulting from Atlas's participation in the project, including but not limited toalleged subsidence and settling or alleged damaged to private and public wells; (c) events concerning the presence of any contaminated, hazardous or toxic matter located or found on or near the project. In regards to item (c) Customer further agrees to assume all additional costs that may be associated with the handling and disposal of any contaminated, hazardous or toxic matter encountered during the course of the project.
- 5. PAYMENT: Terms of payment are not 30 days from invoice date. A monthly service charge of 1.5% or the maximum rate allowed by state law if less than 1.5% is levied on all invoices not paid within 30 days. Absolutely no retainage of any kind may be withhold from payment unless authorized in writing by Atlas. In the event the Payment terms of this Agreement are broken Customer authorizes atlas Dewatering to contact the property owner and/ or general contractor or any other higher tier party, lender or bonding party on the Project and arrange for join checks or direct checks to be written for unpaid job related invoices. If payment,
- 6. BREACH OF CONTRACT: If any of the terms or conditions of this Contract are broken and if atlas provides written notice (by fax, mail, hand delivery, or overnight service), specifying corrective action that must be taken and if such corrective action is not taken within three business days, then atlas Dewatering has the right to enter the jobsite and, upon presentation of this contract (copy or original) and take possession of the equipment. Unless otherwise provided in the Scope of work, Customer agrees to assist with the loading of the equipment and agrees to reimburse Atlas for any costs associated with having to hire third parties to accomplish this task.
- VENUE: Both parties agree that venue for any legal action that may be required under this Contract shall be in the County of Circuit Court of Volusia County, Florida, USA.

Customer initial

E.H. Atlan initial

- 8. The quantity of equipment, wellpoints, fittings, pipe, hoses, etc. are estimated and maybe changed due to unforeseen or changing ground conditions. Customer will be invoiced based on the actual equipment delivered to the Project.
- 9. Customer assumes all risks of loss due to operation and use of the Equipment.
- Compliance with all local, state and federal laws and safety regulations. Adequate protection of the work site
  from caving, collapsing and any other construction hazard.
- 11. Customer is responsible for all Equipment, repairs, maintenance and damage to the equipment, excluding normal wear and tear. Equipment not returned due to loss or destruction not caused by atlas, or returned damaged beyond repair will be billed to the Customer at current list sale prices, less a discount allowance for usage. Should the Equipment break down, call the location that furnished the Equipment and report the problem to arrange for service.
- 12. There are no warranties, express or implied, which extend beyond those shown in this Agreement.
- 13. Performance of a site survey which physically indicates by survey stakes the location of all well/work sites in accordance with this agreement.
- 14. Preparation of suitable areas for equipment and material storage, field buildings, office trailers and tool sheds,
- 15. Acquisition and maintenance of all permits and licenses required for the completion of atlas's work,
- 16. Installation and maintenance of area lighting. Jobsite security. Access to adequate sanitation facilities. Access to adequate communication facilities. Access to adequate emergency services and all emergency services provided to or by the prime contractor. Adequate pedestrian and traffic control protection.
- 17. All operation and day to day maintenance (including daily start-up and testing) of all pumping equipment installed, including manpower, checking, providing and maintaining fuel and other fluid levels, electricity, greasing pump littings, providing fuel tanks, etc.
- 18. Removal and loading of atlas's equipment upon completion of its usage.
- 19. Construction and maintenance of berms, dikes, ditches, equipment pads, excavations, all excavation, all excavation shoring, ramps, sumps, trenches, well sites and all other reasonable and necessary site preparation. Construction and maintenance of access roads capable of accommodating two-wheel drive construction and support vehicles under their own power to all work sites. Construction, assembly and maintenance of all necessary catwalks, ladders, and scatfolding, bracing, cribbing and other equipment supports.
- 20. Removal of unusual or unnatural underground and surface obstructions, including concrete, Marking and any necessary relocation or protection of all on-site and surrounding utilities and service lines above and beneath the ground.
- 21. Adequate protection of Atlas's equipment from freezing conditions.
- 22. Removal of unusual, unnatural or unanticipated underground and surface obstructions, including concrete, that were not anticipated during the planning of the Scope of Work, Marking and any necessary relocation or protection of all on-site and surrounding utility and service lines above and beneath the ground.

# OPTIONAL/ADDITIONAL TERMS & CUSTOMER RESPONSIBILITIES: (Applicable if Initiated by Atlas Dewatering)

23. \_\_\_\_\_Adequate control of water accumulating as perched or trapped water, overtopping water, runoff, seepage, surface water, interface water and in any other form not contemplated by Atlas Dewatering's plan. Adequate control of crossion and sedimentation caused by discharge water or other runoff.

\_\_\_Customer initial

FH Atlas initial

24 Monitoring, samp	oling, testing, containment, treatment and disposal of discharge
25. Ell Containment, trea	rwise provided by Atlas Dewatering's proposal. atment and disposal of all drilling cuttings, excavation spoil, and
spent drilling and jetting fluids.	
	itizing all Equipment used in a sewer or by-pass application.
27. <u>E.H.</u> Access to areas an equipment.	nd facilities for the cleaning and decontamination of Atlas's
28//. Adequate and rea	dily accessible water source at the work locations, including
water meter if required.	
maintained for atlas's use during all excavator which is manned to assist installation of sand easings.	table large track hoe/ crane which are manned, fucled, and I phases of installation and removal. Provision of a suitable t with the loading, unloading, placement of equipment and
dewatering equipment, including 5	essary pads and/or benches to facilitate the installation of the feet of reverse head for drilling.
31. E.H. Stand-by power	
32. Est Monitoring/recordi	ng of groundwater levels during the project
QUOTATION SUBMITTED BY:	
0.001/1	
2 X 14/1/4-1	/ /0 0/0
	(5 - 19-06) DATE
SIGNATURE	DATE
	•
EMGENE G. HELDRETH JR	386-767-0295
NAME PRINTED/TITLE	PHONE NUMBER
ACCEPTANCE OF QUOTATION AND C	CONFIRMATION OF ACREEMENT
	SOUTH THE PROPERTY OF THE PROP
terms, prices and conditions listed within this at the same force and effect as its signed original. I representatives of the company listed and have	cach of the pages contained herein, both Parties agree to the greement. It is agreed a facsimile copy of this agreement will hold Both parties signing below are authorized and legal full legal authority to represent their company in making this AIVERED OR WORK COMMENCE UNTIL THIS
	·
AGREED THIS DAY OF	2005
CUSTOMER NAME	ATLAS DEWATERING INC.
SIGNATURE	SIGNATURE
NAME PRINTED & TITLE	NAME PRINTED & TITLE
WITNESS	WITNESS
ANY CHANGES TO THIS AGREEMENT PARTIES TO BE IN EFFECT.	MUST BE INITIALED AND DATED BY BOTH
	~
CUSTOMER INITIAL	EH ATLAS INITIAL

ALLEN MillER\_ JE. DATONA SAND, CUNIONT 8=/101 PANCE 4/107- 950/101

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HANDED TO HOR ON 3-15-06 . BK



#### E. R. JAHNA INDUSTRIES, INC. TESTING LABORATORY

REPORT OF TESTS OF FINE AND COARSE AGGREGATES
Aggregates produced by E. R. JAHNA INDUSTRIES, INC. at Ortona Sand Mine No.
05-045.

Sampled by our representative from Ortona Sand Company on NOVEMBER 29, 2005.

Project

Specifications - DOT

Вилир	le Weight	308_3		ype of Aggregate	Fine	
			SL	EVE ANALYSE	S	· — ·
SIZE		WEIGHT		PER CENT RETAINED	PER CENT PASSING	SPECIFICATION
	#8 SDEVE		D .	900	100	û-5
			z	600	160	0-I5
#16	SIEVE	14.1		005	95	3-35
#38	SIEVE	160	.4	052	048	30-75
#50	SIEVE 265.5		5	086		
#100	FIOO SIEVE		307.1 100		000	95-100
#200/Pan	SIEVE	308.	,	-	· · · · · · · · · · · · · · · · · · ·	33-200
	SIEVE					
	STEVE			EMICAL ANALYSIS	INL PLANT -	··-
	SIEVE			un Oxide	0.249	
				Carbonate	1.126	
	SIEVE	Chloride			D.0006 -	
	SIEVE		Iron Oxide			
	STEVE			um Oxide	0.105	
	STEAT	. +	Potassic	m Oxide	0,571	
			Saft		0.0005	
neness			Silicon D	roxide	97.5	
odulus 2	42		Sodium			
- 4 0 0 0 0			Sodium (	)xide	8.035 6.047	1
erage: 2.4	I-FM					
	≥ _20 <u>- ,5</u>	5 mm		TY 70		
or led to -	·				Coefficient 1.5>	
				Laboratory Ren	Personative Person	r Shenberd

AMEN MillER 239-489-4094 2 SHUETS RICHARD SMSSEN



# Materials Engineering and Testing, Inc.

Construction Materials Testing / Soils Engineering

3903 Industry Blvd., #10 Lakeland, PL 53811

Telephone: (863) 646-299c Fax: (863) 648-099c

# Summary of Laboratory Test Results

Project Name: Laboratory Testing

Report Date: January 9, 2003

Location: Various

Client: E.R. Jahna Industries, Inc

Project No.: 35001

Lab No.: 1 SA/K thru 3 SA/K

Contractor: E.R. Jahna Industries, Inc.

Date Tested: December 2002/January 2003

ASTM Method: D2922

	Grione (Sellpoint		Octo	DE FEOT	TOT mehacquini	
SieveNa.	ladividual % Retained	Total % Passing	individual %Retained	Total % Passing	Individual %Retained	Total % Passing
4	0.0	100.0	0.0	100,00	0.0	100.0
8	0.40	99.60	0.21	99.79	. 0.29	99,71
10	0.77	98.23	0.22	99.57	0.33	59.37
16	22.12	76.61	6,51	93.05	5.34	94.03
29	39.45	37.26	16.55	76.50	10.91	83.12
30	33.04	4.22	39.44	37.06	23.87	59,25
35	N/A	N/A	N/A	N/A	8.65	50.50
40	3.62	0.60	19.78	17.28	13,64	36.95
45	N/A	N/A	N/A	M/A.	11.79	25.17
50	0.23	0.38	8.28	10.8	9.91	15.26
60	0.06	0.31	2.85	6.08	7.01	8.25
80	0.12	0.19	4.33	1,73	6.32	7.32
100	0.03	0.16	0.75	ae.o	0.71	0.62
290	0.03	0.13	0.81	0.17	0.59	0.58

				<del></del>
	Sample	Parmasbility	Dry Denelly (pcf)	% Moisture
	Ortona Wellpoint	8.81x10-2 cre/sec (249.73 ft/day)	102.7	3.9
$\rightarrow$	Ortona FDOT	6.74x10-2 cm/sec (181,06 ft/day)	104,1	7.1
	Independent FDOT	6.11x10-2 cm/sec (173.20 ft/day)	105.2	6.3

Copies 2: Cient

Reviewed By:

Mark W. Walters, SET

HANDED TO HOPE ON 3-15-06



### E. R. JAHNA INDUSTRIES, INC. TESTING LABORATORY

REPORT OF TESTS OF FINE AND COARSE AGGREGATES Aggregates produced by E. R. JAHNA INDUSTRIES, INC. at Ortona Sand Mine No. 05-045.

Sampled by our representative from Ortona Sand Company on NOVEMBER 29, 2005.

Project

Specifications - DOT

	e Weight	3000	170	e of Aggregate	Fine		
			SIEV	E ANALYSI	S	· · · · · · · · · · · · · · · · · · ·	
		WEIG	EGHT PER CENT RETAINED		PER CENT PASSING	SPECIFICATION	
#4 STEVE 0		0.0	0 900		100	0-5	
#8	SEEVE	0.3		000	100	8-15	
#16	SIEVE	14.1		005	995	3-35	
#30	SIEVE	160.4			048	30-75	
#50 SIEVE 25		265.5				30-75	
,		2000		086	014	65-95	
#100	SIEVE	307.1		100	000	95-100	
200/Pani	SIEVE	308.3			· · · · · · · · · · · · · · · · · · ·		
	SIEVE			·			
	STEVE		YPICAL CHEN	ICAL AMALYSIS	IN PLANT		
			Aluminum	Oxide	0.249		
	SIEVE	<u> </u>	Calcium C	arbonate	t_126	· · · · · · · · · · · · · · · · · · ·	
	SIEVE		Chlorida		D_0006	<del></del>	
	SLEVE	[_	Iron Oxide		0.0357	*.	
			Magnesiun	Dxide	0.105		
	SIEVE		Potassium	Oxide	0,571	<del></del>	
			Saft		0.0005	Í	
		_	Silicon Diox	ide	97.5		
eness	ł		Sodium		0.035		
dulus 2	42		Sodium Oxid	de	0.047	ĺ	
rage: 2.4	I-FM						
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orted to -				_		er Strepberd	

AMEN MillER 239-489-4094 2 SHUETS



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	<del>Siston</del>	anioqEaW-paotne		Octoba FEOT		Independent FDOT	
Sieveh	lo, Individual % Retained	Total % Passing	individuat %Retained	Total % Passing	Individual %Retained	Total % Passing	
4	<b>a</b> ro	100.0	0.0	100,00	0.0	100.0	
8	0.40	99.60	0.21	99.79	. 0.29	99.71	
10	0.77	98.23	0.22	-99.57	0.33	99.37	
16	22.12	76.61	6,51	93.05	5,34	94.03	
29	39.45	37.26	16,55	76.50	10.91	83.12	
30	33.04	4.22	39,44	37.06	23.87	59.25	
35	N/A	NIA	N/A	N/A	81.65	50.60	
40	3.62	.0,50	19.78	17.28	13.64	36.95	
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80	0.12	0.19	4.33	1,73	6.32	1_32	
100	0.03	0.16	0.75	- 8e,ŏ	0.71	0.62	
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	Semple	Permeability	Dry Density (pail	% Moisture
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